

## **Appendix A: Stakeholder Meeting Reports**

# **Des Plaines River Watershed Kickoff Meeting**

## **March 17, 2016 – 2:00 to 4:00 PM and 6:30 to 8:30 PM**

### **MEETING REPORT**

---

**Meeting Purpose:** Bring together a diverse group of watershed stakeholders, familiarize attendees with watershed planning and the Des Plaines River watershed, and begin to develop a watershed plan.

#### **Desired Meeting Results:**

- Stakeholders have an understanding of watershed conditions and watershed planning process
- Stakeholders identify watershed issues and opportunities

### **MEETING SUMMARY**

#### **Introductions:**

A list of the meeting attendees is included with this meeting report.

#### **Overview of the Watershed:**

An overview of the watershed planning project and process, and a characterization of watershed conditions were presented. The presentations are available on the SMC website.

Patty Werner presented what a watershed plan is, how it is used, and explained why we are doing a watershed plan for the Des Plaines River watershed, and briefly covered how the watershed planning process will work over the next 26 months.

#### **Watershed Characteristics:**

Ashley Warren described the characteristics and condition of the Des Plaines River watershed including historic land cover, ecology/natural resources, and current and projected watershed land use and demographic data. Mike Novotney presented on the effects of urbanization on land changes, increased stormwater runoff and impacts on streams. Jeff Laramy summarized SMC's stream and detention basin inventory efforts and procedures. Mike Prusila presented information on the stream water quality conditions in the Des Plaines River watershed. Mike Adam with the Lake County Health Department presented on water quality and conditions of the Des Plaines River lakes. Mike Warner ended the presentation with a brief overview of the studies and assessments of floodplain areas in the watershed and flood problem areas.

#### **Watershed Issues and Opportunities:**

Meeting participants were divided into four (4) groups (both meetings) with a facilitator assigned to each group for this stakeholder input exercise. Meeting facilitators in each group asked that the meeting participants identify issues, opportunities, and strategies that they think should be addressed in the watershed planning process. Each participant in turn provided the issues of greatest concern to them, and opportunities and strategies to improve the watershed. These were recorded on flip charts and are compiled in an attached table.

#### **Questions/comments from the meeting attendees from the presentation (both sessions):**

##### ***Question/Response***

1. *Why was Bull Creek taken off the Impaired Waters list in 2016?*  
More recent monitoring may have shown that pollutant levels in that segment of Bull Creek did not exceed state standards.
2. *What is a Flood Problem Area (FPA)?*  
FPAs are composed of one or more structures in a geographical area that are damaged by the same primary source/cause of flooding. Structures include transportation, utility infrastructure, buildings, and well and septic failure caused by flooding. Areas also include locations where road flooding results in damage to infrastructure, loss of critical access or is a threat to safety. Nuisance flooding: includes yard or open space flooding where it does not result in damage to a structure, loss of access, or loss of septic or utility function.
3. *Did SMC send flood questionnaires to people who have flood problems as a result of poor watershed management?*

While SMC does not have the capacity to send a letter to every resident in the watershed, the meeting invitation mailing, which included a link to the online flood questionnaire and a riparian landowner brochure, was mailed to residents that live along tributary streams, the Des Plaines River and around the lakes in the watershed, and also to those addresses that are located in known flood problem areas.

4. *What models will SMC be using to model pollutants loads?*

SMC is hiring a consultant to do nonpoint source pollutant loading modeling in late 2016 or early 2017. Consultants will submit the type of methods they will use in response to a request for proposals.

5. *Did SMC get permission from property owners to do the stream inventory work?*

Letters were sent to larger property owners informing them that SMC staff will be inventorying the streams. SMC also notified all of the municipalities and watershed stakeholder lists via email that inventories were underway.

6. *How will SMC watershed planning efforts involve the Route 53 road expansion?*

The Route 53 road project will be treated as any other future land use change in the watershed plan. Projected future land use will be used for impervious cover calculations and nonpoint source pollutant modeling for future conditions. SMC typically collects future land use information from land use planning authorities such as Chicago Metropolitan Agency for Planning (CMAP), Lake County, Kenosha County and the municipalities in the watershed. This information is used as best available data for mapping and modeling purposes.

7. *Why isn't more of the Wisconsin portion of the watershed included in this planning effort?*

The Southeastern Wisconsin Regional Plan Commission's (SEWRPC) has completed a watershed plan for the Des Plaines River in Wisconsin that SMC will use to inform this planning study. Illinois EPA typically does not use Illinois designated grant funds for out of state projects.

8. *TMDLs have been established for Indian Creek and Buffalo Creek subwatersheds, will TMDLs be completed for the remainder of the watershed?*

Illinois EPA is responsible for completing Total Maximum Daily Load (TMDL) studies that identify the maximum amount of a pollutant that receiving waters can absorb without violating state water quality standards. TMDLs for the mainstem of the Des Plaines River and the upper Des Plaines subwatersheds in Lake County will likely not be completed by Illinois EPA during this planning process.

9. *Other planning jurisdictions in the Des Plaines watershed include the Southeastern Wisconsin Regional Planning Commission, the Metropolitan Water Reclamation District of Greater Chicago, and the Cook County Forest Preserve District. The Buffalo Creek Watershed-Based Plan includes a portion of Cook County.*

10. *Are there any River Watch activities going on right now?*

Riverwatch monitoring is occurring in the Buffalo Creek subwatershed, and there are possibly two (2) additional sites being monitored in the Bull Creek/Brook subwatershed.

11. *Is there an agency designated for keeping the river clear (of debris)? An example was a tree was lodged on Buckley Road Bridge and was just cleared recently.*

No one agency is dedicated to just clearing stream and river debris. SMC does not have the funding to be able to provide a stream maintenance service at this time. There are a few drainage districts in the watershed that do some debris management in their easement sections. Roadway authorities clear debris within their right of ways. Private landowners are responsible for maintaining the stream channel or lakeshores on their properties. SMC does provide up to \$500 to organizations for stream cleaning efforts (SMC provided funding for 5 stream cleanup efforts in 2015).

### **Next Meetings:**

Stakeholders voted on preferences for the next meeting date and the preferred day of the week for future meetings. The next watershed meeting will be held on April 28<sup>th</sup> 2016 in the afternoon, more details to follow. Thursday was voted as the day most convenient for watershed stakeholders to attend meetings. Several meetings will be scheduled in the evenings.

### **Final Announcements:**

Names were drawn for rain barrel and compost bin raffle winners at both meetings.

A summary of the stakeholder input on watershed issues and opportunities and a summary meeting report will be sent via email and posted on the SMC website.

**Meeting Attendees:**

Last Name	First Name	Organization
Adam	Mike	Lake County Health Dept. (LCHD) Lakes Management Unit
Rogers	Carol	Warren Township High School
Zehner	Steve	Robinson Engineering
Bartolai	Alana	LCHD
Salemi	Joseph	North Lakeshore Realty Co.
Dittrich	Wally	Village of Lincolnshire
Brown	David	Village of Vernon Hills
Knysz	Marcy	TRC / BCCWP
Heilemann	Rosemary	League of Woman Voters – Lake County
Weiss	Jeff	Buffalo Creek Clean Water Partnership
Soliz	Maggie	Applied Ecological Services
Shimbey	David	Plan Commission Riverwoods
Geiselhart	Chris	Bull Creek Bulls Brook Stakeholder
Wojcik	Thomas	Resident
Resnick	Margaret	Mundelein Park District
Bland	Jim	Sierra Club
Bouchard	Chris	RHMG
Roberts	Jesse	Senator Mark Kirk Rep.
Neu	Dave	Conserve Lake County
Lodesky	Joe	Resident
Bartholomew	Boh	Resident
Dorn	Brian	North Shore Water Reclamation District
Robinson	Joe	North Shore Water Reclamation District
Lannin	Sue	Resident
Hurtade	Juan	Resident
Godshalk	James	Resident
Burger	Jeanette	Resident
Ettinger	Frank	Resident
Snarr	Jack	Resident
Wagner	Bryan	Illinois Tollway
Nehila	Jeff	Grayslake Park District
Pedersen	Linda	Lake County Board
Bartholomew	Pat	EHS Services
Jacobson	Rick	Jacobson Golf Course Design
Shatkin	Judy	Resident
Kendzior	Paul	Village of Libertyville
Vella	Steve	Village of Libertyville
Chefalo	Tom	Lake County Planning Building and Development (PB&D)
Anderson	Jim	Lake County Forest Preserve District (LCFPD)
Talbett	Michael	Village of Kildeer
Ettinger	Albert	Sierra Club
Barner	Allie	Natural Resource Conservation Service (NRCS)
Rospopo	Jim	NRCS
Morthorst	Tom	Village of Third Lake
Craig	Evan	Sierra Club
Frable	Erika	Village of Hawthorn Woods
Geiselhart	Paul	Lake County Audubon
Koch	Greg	MWRDGC
Weinen	Kitty	Senator Mark Kirk Rep.
Klonowski	Paul	Resident
Papa	Jan	Bluestem Ecological Services

Last Name	First Name	Organization
Wilson	Don	Resident
Flood	Rob	Gages Lake Conservation Committee, North Shore Water Reclamation District
Moffat	Cory	Resident
Grosuewer	Brad	Resident
Weik	Ken	Resident
Herr	Mr. & Mrs. P.	Resident
Aldridge	Margie	Resident
Aldridge	Warren	Resident
Moss	Glen	Lake County Audubon
Cwiak	Dave	Vernon Hills Park District
Wittenberg	Bill	Resident
Stefani	Bill	Lake County Tech Campus
Yun	Charles	Resident
Kolar	Trish	Resident
McDonough	Andy	Resident
Machado	Kathie	Resident
Benavides	Kristen	Resident
Benavides	Dominic	Resident
McDonough	Lisa	Resident
Werner	Patty	Lake County Stormwater Management Commission (SMC)
Warren	Ashley	SMC
Warner	Mike	SMC
Prusila	Mike	SMC
Novotney	Mike	SMC
Vancil	Susan	SMC
Laramy	Jeff	SMC
Schindelar	Neil	SMC
Osterby	Sharon	SMC
Traynoff	Kelcey	SMC
McNeill	Darcy	SMC

**DES PLAINES RIVER WATERSHED MEETING AGENDA**  
**CENTRAL PERMITTING FACILITY**  
**APRIL 28<sup>TH</sup> 2016**  
**2:00PM – 4:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to complete and prioritize watershed issues and opportunities and to begin developing future watershed plan goals and a watershed vision statement.

**Meeting Objectives:**

- Prioritize watershed issues, opportunities, and strategies
- Agree on watershed plan goals
- Develop content for a vision statement

**1. *Introductions and Announcements***

- a. Introductions
- b. Website navigation to SMC Des Plaines River watershed plan page
- c. Review and accept March meeting summary

**2. *“Tell it in Ten” Series: Des Plaines River Watershed Workgroup (DRWW)***

- a. Andrea Cline, GeoSyntec Consultants

**3. *Prioritize Watershed Issues, Opportunities & Strategies***

- a. Stakeholders will get a chance to vote on watershed issues and opportunities/strategies from the March 17<sup>th</sup> 2016 kickoff meetings.

**4. *Watershed Vision, Our Mission, Plan Goals and Objectives Presentation***

- a. Presentation, followed by voting on watershed goals

**5. *Begin Developing Vision Statement***

- a. Facilitated session

**6. *Next Meeting & Remaining Questions***

- a. Next meeting: June 1<sup>st</sup> 2016 at Lake County Central Permitting Facility, 2:00-4:00pm

# **Des Plaines River Watershed Plan Meeting**

## **April 28, 2016 – 2:00 to 4:00 PM**

### **Lake County Central Permitting Facility**

#### **MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to complete and prioritize watershed issues and opportunities and to begin developing future watershed plan goals and a watershed vision statement.

#### **Desired Meeting Results:**

- Prioritize watershed issues, opportunities, and strategies
- Agree on watershed plan goals
- Develop content for a vision statement

#### **MEETING SUMMARY**

##### **Introduction & Announcements:**

Patty Werner, Planning Supervisor of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Meeting attendees introduced themselves. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the March 17<sup>th</sup> 2016 meeting summary by consensus of the group.

##### **“Tell it in Ten” Series: Des Plaines River Watershed Workgroup (DRWW)**

Andrea Cline, GeoSyntec Consultants gave a presentation on behalf of the DRWW. The presentation included: Des Plaines River watershed characteristics, who the DRWW is, why they were formed, and current and planned activities of the DRWW within the watershed.

##### **Questions/comments from the meeting attendees from the presentation:**

###### ***Question/Response***

1. *Can you explain stream reach impairment significance and why stream reaches are not meeting IL EPA standards for impaired waters.*  
Andrea Cline explained the use of TMDLs to monitor and assess pollutant loads to impaired waters.
2. *What is Dissolved Oxygen?*  
The amount of oxygen dissolved in the water that is available to support fish and other aquatic animals.
3. *Will DRWW be monitoring for pesticides?*  
Yes water chemistry will test for these in the water column.

##### **Prioritizing Watershed Issues, Opportunities & Strategies:**

Ashley Warren, SMC, led a discussion on the process that was used to compile the meeting attendee feedback from the March 17, 2016 Kickoff Meeting. The meeting attendees were then asked to clarify several topics that were listed at the March 17<sup>th</sup> meeting that were not easily understandable. The group was asked if any changes or additions needed to be made to the breakout session summary before voting began, no additional changes were made.

The meeting attendees were given ten votes to prioritize issues and ten votes to prioritize opportunities/strategies. A copy of the breakout summary of the issues and opportunities/strategies with tallied votes is attached.

##### **Goals, Objectives, & Vision and Mission Presentation:**

Patty Werner, SMC, gave a brief presentation reviewing the watershed planning process and explained the differences between setting goals and objectives, and a vision versus a mission statement.

##### **Watershed Goal Voting:**

Ashley Warren explained that the summary of issues and opportunities presented by stakeholders at the March meeting has been compiled into watershed goal categories. Meeting attendees were given an opportunity to prioritize seven potential watershed goal categories from highest to lowest priority. The vote results of the watershed goals are attached.

#### **Begin Developing Vision Statement:**

Each meeting attendee was given a Des Plaines River watershed plan vision exercise sheet to list three to four phrases for four questions related to the future watershed conditions. After listing a few phrases for each question, the meeting attendees were asked to choose their top answer (phrase) for each question.

The meeting room was split into four smaller groups to review each group participant's top answers to the questions. Each small group voted on their preference of vision phrases to share with the larger group. Each group reported their top vision phrases to the larger group. The larger group then voted on which of the breakout group's vision phrases should be included (or combined) into the Des Plaines River watershed vision statement. See the table below for the vision statement exercise results.

#### **Next Meetings:**

Stakeholders voted on preferences for the next meeting date (June 1<sup>st</sup> or June 16<sup>th</sup>). The next meeting will be held on June 1<sup>st</sup> 2016 in the afternoon, more details to follow. All of the watershed meeting summaries, agendas, and meeting information will be posted on SMC's website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **Meeting Attendees:**

Last Name	First Name	Organization
Joyce	Brian	City of Lake Forest
Bartholomew	Bob	Resident
Stauber	Camille	Sustainable Places Inc.
Jacobson	Rick	Jacobson Golf Course Design
Machado	Kathie	North Libertyville Estates Community Association (NLECA)
Wittenberg	Bill	Resident
Nickels	John	Resident
Adam	Mike	Lake County Health Dept. (LCHD) Lakes Management Unit
Heilemann	Rosemary	League of Woman Voters – Lake County
Pippen	Scott	Village of Lincolnshire
Anderson	Jim	Lake County Forest Preserve District (LCFPD)
Talbett	Michael	Village of Kildeer
Morthorst	Tom	Village of Third Lake
Vella	Steve	Village of Libertyville
Amidei	Moses	Village of Wadsworth
Bland	Jim	Sierra Club
Vogel	Randy	Land & Water Resources, Inc.
Reed	Bud	East Skokie Drainage District (ESDD)
Papa	Jan	Bluestem Ecological Services
Hicks	Bob	Resident
Shafer	Barbara	Resident
Flood	Rob	Gages Lake and North Shore Water Reclamation District (NSWRD)
Robinson	Joe	North Shore Water Reclamation District
Ryan	John	Land & Water Resources, Inc.
Burke	Caitlin	Gewalt Hamilton
Stefani	Bill	Lake County Tech Campus
Leach	Nick	Village of Gurnee
Gerleman	Doug	Go Green and Northbrook Environmental Committee
O'Connor	Jen	Resident
Griffith	Scott	Lake County Stormwater Management Commission (SMC)
Werner	Patty	SMC



Last Name	First Name	Organization
Warren	Ashley	SMC
Warner	Mike	SMC
Prusila	Mike	SMC
Novotney	Mike	SMC
Laramy	Jeff	SMC
Osterby	Sharon	SMC

# Des Plaines River Watershed Plan Meeting

## June 1<sup>st</sup> 2016 – 1:30 to 3:30 PM

### Lake County Central Permitting Facility

#### **DRAFT MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about stormwater green infrastructure practices, review and agree on the vision for the watershed and get stakeholder feedback on watershed plan goals and objectives.

#### **Desired Meeting Results:**

- Agree on our vision for the watershed
- Develop watershed plan goals and objectives

#### **MEETING SUMMARY**

##### **Introduction & Announcements:**

Patty Werner, Planning Supervisor of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Meeting attendees introduced themselves. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the April 28<sup>th</sup> 2016 meeting summary by consensus.

##### **“Tell it in Ten” Series: Libertyville Township Open Space District**

Kathleen O’Connor, Libertyville Township Supervisor gave a presentation on behalf of the Libertyville Township Open Space District. The presentation included: background of the Libertyville Township Open Space District, different projects the District has accomplished and looking to accomplish, youth and volunteer activities, and partnerships and their roles with the Open Space District. Presentation will be posted with the meeting report on SMC’s website: <http://www.lakecountyil.gov/3655/Agendas-and-Minutes>.

##### **Questions/Comments:**

###### *Question/Response*

1. *What material is the trail made of?*  
CA-6 stone/crushed gravel material is used on most of the trail systems. There are two sections of asphalt due to areas of heavy machinery use.
2. *Is the Casey Road area agriculture use disappearing?*  
People were asked about this area and wanted to see the (agriculture) area restored to prairie.
3. *Will the new trail be different than the Lake County Forest Preserve District (LCFPD) trails?*  
No, the trails installed by the Open Space District will be uniform with the LCFPD trail, except for the trail markers.

##### **Meeting Topic: Stormwater Green Infrastructure Practices**

Mike Novotney, SMC Principal Water Resources Professional gave a presentation on stormwater green infrastructure practices. The presentation included: a breakdown on what green infrastructure (GI) is, how GI practices work, and examples of best management practices including their benefits and where they can be installed. Presentation is attached.

##### **Questions/Comments:**

###### *Question/Response*

1. *Is there regional green infrastructure to preserve?*  
Yes, examples of that would be LCFPD areas and keep in mind that not all regional green infrastructure has been inventoried. This watershed planning effort will help identify additional areas.
2. *How do Green Infrastructure practices reduce the carbon footprint?*  
GI assists in the capture of carbon dioxide from the atmosphere by absorbing it and acting as a long-term storage, instead of it being released and contributing to climate change.

### Review and Vote on a Vision Statement:

Ashley Warren and Patty Werner, SMC, led a discussion on the process that was used to compile the meeting attendee feedback from the April 28, 2016 watershed meeting. Based on the stakeholder feedback SMC summarized two vision statement options. Jim Anderson created an additional (Option #3) vision statement for the group to review. After a discussion about each of the three options it was decided by consensus that the group would like Option #1 to incorporate an education and recreation component and use some language from Option #3 and have it presented to the group at the July 14<sup>th</sup> 2016 watershed meeting. See meeting presentation to view all three vision statement options.

3. *Private landowners should have the ability to do maintenance or drainage improvements on private property. Will this watershed plan add additional stormwater regulatory requirements (in regards to private property maintenance)? Who does what?*
  - SMC is the coordinating agency to coordinate on stormwater management issues and solutions. SMC coordinates with local jurisdictions to address stormwater related issues.
  - The watershed plan vision statement will consider the entire watershed, but could include looking at the regulatory impacts on the watershed drainage system.

### Stakeholder feedback on Watershed Goals and Objectives:

Patty Werner, SMC, explained that SMC has compiled draft watershed goals, outcomes, and objectives based off the issues and opportunities/strategies identified by stakeholders at the March and April meetings. Attendees were broken up into four groups to visit and review the draft goals at objections at four stations. Participants had 10-15 minutes at each station to review the draft goals and objectives and add comments or suggest revisions. SMC will revise the goals and objectives for stakeholder review at the July meeting.

### Next Meetings:

The next meeting will be held on July 14<sup>th</sup> 2016 from 1:30pm – 3:30pm at the Lake County Central Permitting Facility (2<sup>nd</sup> Floor). All of the watershed meeting summaries, agendas, and meeting information will be posted on SMC's website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

### Meeting Attendees:

Last Name	First Name	Organization
Smith	Brian	Illinois Tollway (AECOM)
Weiss	Jeff	Buffalo Creek Clean Water Partnership
Chefalo	Tom	Lake County Planning, Building & Development
Nehila	Jeff	Grayslake Park District
Eckebrecht	Mark	Beach Park Resident
Geisenhoffer	Colin	U.S. EPA Region 5
Godshalk	Jamie	Resident/Lincolnshire
Shimberg	David	Riverwood Resident
Heilemann	Rosemary	League of Woman Voters – Lake County
Brown	David	Village of Vernon Hills
Anderson	Jim	Lake County Forest Preserve District (LCFPD)
Dittrich	Wally	Village of Lincolnshire
Papa	Jan	Bluestem Ecological Services
Flood	Rob	Gages Lake and North Shore Water Reclamation District (NSWRD)
O'Connor	Kathleen	Libertyville Township Open Space District/Bull Creek-Bull's Brook Watershed
Machado	Kathie	Resident/North Libertyville Estates
Vancil	Susan	Lake County Stormwater Management Commission (SMC)
Werner	Patty	SMC
Warren	Ashley	SMC
Novotney	Mike	SMC
Laramy	Jeff	SMC
Osterby	Sharon	SMC

# **Des Plaines River Watershed Plan Meeting**

## **July 14<sup>th</sup> 2016 – 1:30 to 3:30 PM**

### **Lake County Central Permitting Facility**

#### **DRAFT MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about flooding and flood mitigation programs. Stakeholders will identify additional flood problem areas within the watershed and agree on a vision for the watershed.

#### **Desired Meeting Results:**

- Finalize our vision for the watershed
- Stakeholders know more about flood risk, response, and damage within the watershed

#### **MEETING SUMMARY**

##### **Introduction & Announcements:**

Patty Werner, Planning Supervisor of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Meeting attendees introduced themselves. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the June 1<sup>st</sup> 2016 meeting summary by consensus.

##### **“Tell it in Ten” Series: Lake County Emergency Management Agency (LCEMA) & Lake County SMC Flood Response**

Kent McKenzie, Coordinator for LCEMA, gave a presentation on Lake County EMA’s role in Lake County flood response and broke down the process through different phases. Kent gave a brief description of the four phases involved for flood response (preparedness, pre-incident, during incident, and post-incident) and their different components.

Kurt Woolford, Chief Engineer at SMC, gave a presentation on flooding in Lake County and SMC’s role with flood response. Kurt explained SMC’s Flood response manual and a brief overview of SMC’s response teams, Threat Alert Level system based on NWS watches and warnings and the associated response to each level, and what is evaluated by SMC during a flood briefing.

##### **Meeting Topic: Flooding and SMC’s Buyout Program**

Sharon Østerby, SMC Water Resource Professional, gave a presentation of Des Plaines River watershed flooding, resident flood survey responses, and flood mitigation programs. The presentation included: an overview of floodplains, types of flooding and nuisance flooding/drainage issues, SMC’s flood problem area (FPA) inventory, and measures that can be taken to protect properties that have flooding problems.

All presentations will be posted with the meeting report on SMC’s website:

<http://www.lakecountyil.gov/3655/Agendas-and-Minutes>.

##### **Flood Problem Areas (FPA):**

Patty Werner, SMC, gave a brief presentation on Flood Problem Areas (FPA) and how the information will be incorporated into the watershed based plan. SMC will soon request updated flood problem area information from municipalities and townships (excluding those in the Buffalo Creek watershed since communities in that watershed updated the FPA within the past couple years with the development of the Buffalo Creek Watershed Plan).

##### **Finalize a Watershed Vision Statement:**

Ashley Warren and Patty Werner, SMC, led a discussion on the process that was used to compile the meeting attendee feedback from the April 28, 2016 and June 1<sup>st</sup> 2016 watershed meetings. Based on the stakeholder feedback SMC summarized a draft vision statement for the Des Plaines River Watershed Planning Committee approval. After a discussion about the process of compiling the vision statement and additional stakeholder input, the Des Plaines River Watershed Planning Committee gave a 1<sup>st</sup> motion (Jeff Weiss) and 2<sup>nd</sup> motion (Paul Kendzior) to approve the vision statement and the watershed vision statement was approved by consensus.

## Approved Des Plaines River Watershed Vision Statement:

*The Des Plaines River Watershed will be a destination valued by residents, businesses and governments that join together to actively engage in education and participate in improving water quality. Stakeholders will preserve and enhance regional green infrastructure, resulting in cleaner streams and lakes, better plant and animal biodiversity and reduced flood damage while balancing a sustainable native landscape with development and economic growth.*

## Questions/Comments:

### Question/Comment & Response

1. *The planning committee should focus on the reduction of levees, employ more flood control measures, grassland floodplains, talk about what people can do to stay out of floodplains, and the effects of urban development on flooding.*

Patty explained that all of these are good topics that can be incorporated into the watershed issues and opportunities/strategies list and discussed further as we develop the mission statement and the watershed action plan. Ashley took notes of all of the suggestions to add into the watershed based plan discussion list.

2. *What is “enhanced regional green infrastructure”?*

Patty described regional green infrastructure as the network of floodplains, wetlands and open land in the watershed that infiltrates, and stores rainfall. Forest preserves, parklands, and private open lands all make up the regional green infrastructure network. Site level green infrastructure includes stormwater practices that infiltrate and store rainfall on developed properties such as native landscaping, rain gardens and the green roof here at the Central Permit Facility.

3. *What is the floodplain, how is it determined?*

Kurt Woolford, SMC, explained that a floodplain is an area of low-lying ground adjacent to a river or stream, formed mainly of river sediments and subject to flooding. The Federal Emergency Management Agency (FEMA) determines the locations of floodplain areas, and we use FEMA maps to regulate/manage floodplains. Kurt noted that FEMA does re-evaluate areas and revises the locations of some floodplains.

## Stakeholder Identify Flood Problem Areas:

Attendees were asked to use the maps on the wall to identify and describe additional flood problem areas or drainage issues they know about within the Des Plaines River Watershed. The information collected will be incorporated into our watershed based plan. Watershed maps with SMC existing data and information collected at the watershed meeting are on SMC’s website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

## Next Meetings:

The next meeting will be held on August 18<sup>th</sup> 2016 from 1:30pm – 3:30pm at the North Shore Water Reclamation District (NSWRD), 14770 William Koepsel Drive, Gurnee, Illinois 60031. All of the watershed meeting summaries, agendas, and meeting information will be posted on SMC’s website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

## Meeting Attendees:

Last Name	First Name	Organization
Amidei	Moses	Village of Wadsworth
Leach	Nick	Village of Gurnee
Talbett	Michael	Village of Kildeer
Nelson	Kristina	Wildwood Resident
Wilson	Don	Lindenhurst Resident
Lee	Rita	IDNR -OWR
Milner	Bill	IDNR -OWR
Neu	Dave	Conserve Lake County
Hicks	Bob	Liberty Lake
Wittenberg	Bill	Libertyville Township Resident
Kendzior	Paul	Village of Libertyville
Dane	Leonard	Deuchler Environmental, Inc. (DEI)

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Adam	Mike	LCHD
Smith	Brian	Illinois Tollway (AECOM)
Weiss	Jeff	Buffalo Creek Clean Water Partnership
Hey	Don	Wetlands Research Inc. (WRI)
Burke	Caitlin	Gewalt Hamilton & Associates (GHA)
Dittrich	Wally	Village of Lincolnshire
Curran	Jerry	WRI
Flood	Rob	Gages Lake and North Shore Water Reclamation District (NSWRD)
Baczek	Evan	DuPage Stormwater Management
Nathan	Walter	Riverwoods Resident
Vancil	Susan	Lake County Stormwater Management Commission (SMC)
Werner	Patty	SMC
Warren	Ashley	SMC
Warner	Mike	SMC
Prusila	Mike	SMC
Osterby	Sharon	SMC

# **Des Plaines River Watershed Planning Meeting**

## **August 18, 2016 – 1:30 to 3:30 PM**

### **North Shore Water Reclamation District – Gurnee, Illinois**

#### **MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about wastewater treatment plant upgrades and expansions, efforts made for upstream and downstream biological monitoring, and green infrastructure practices installed at those facilities.

#### **Introduction & Announcements:**

Ashley Warren, Water Resource Professional of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Meeting attendees introduced themselves at the beginning of the Des Plaines River Watershed Workgroup (DRWW) meeting. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the July 14<sup>th</sup> 2016 meeting summary by consensus.

#### **“Tell it in Ten” Series: North Shore Water Reclamation District (NSWRD)**

Brian Dorn, Executive Director for NSWRD, gave a presentation on the history of the NSWRD leading up to present day conditions and services, the operations of the NSWRD, and photos of different operating systems within the wastewater treatment plant (WWTP).

#### **Meeting Topic: Wastewater Treatment Plant Panel Discussion & Identifying Recommendations for Watershed Plan**

Ashley Warren gave a brief presentation about the wastewater treatment plants located within the Des Plaines River Watershed planning area. Ashley provided background information on the locations and volume of flow treated at the plants to start the wastewater treatment plant panel discussion. Four wastewater treatment plant representatives each gave a short presentation about the wastewater treatment plant they work at describing the current operations of the plant, daily average flows for the plant, monitoring efforts, overflow operations and any expansions and upgrades to the plant.

Presenters:

1. Joe Robinson, Director of Laboratory Services, NSWRD WWTPs
2. Paul Kendzior, Director of Public Works, Village of Libertyville WWTP
3. Jason Pieper, Chief Operator, Lake County Public Works Department WWTPs
4. Charles Hernandez, Crew Supervisor & Rafel Palka, Plant Operator, Village of Lindenhurst WWTP

#### **Topics Presented by Panelists:**

- Past water quality monitoring indicates:
  - chloride levels are rising especially as you move south in the watershed
  - the river is nutrient impaired based on fluctuating dissolved oxygen levels
  - water clarity has improved over the years
- Effects of biological nutrient removal (BNR) on phosphorous level of effluent and the different BNR results between WWTPs.
- Receiving and treating septic waste has become a good revenue source for LCPW
- The roles biological and chemical treatment play in phosphorous removal
- The effects of heavy rain on a wastewater treatment plant flow (due to stormwater entering the sanitary system) and overflow discharge procedures when influent exceeds plant treatment capacity.
- What the future holds for WWTP's with the National Pollutant Discharge Elimination System (NPDES) Permits becoming more stringent for phosphorus removal.

#### **Discussion Notes:**

- The sources of impairment to the river need to be properly identified and appropriately addressed rather than depending on WWTP discharges solely to reduce pollution. Need to address nonpoint sources of pollution to reduce impairments and improve water quality.
- All of the WWTPs report heavier wet weather flows through their plants that indicate inflow of stormwater into the sanitary system, and have activities to reduce wet weather flows and accommodate overflow conditions.
- Compiling with more stringent permit requirements will be more expensive for WWTPs and their customers.

- WWTP's have more flexibility to do the best they can on removing phosphorus rather than having to comply with a mandatory limit so that WWTP can give the public the best bang for their buck in treatment for water quality.
- Public education needs related to proper disposal of unused pharmaceuticals and personal care items labeled as "flushable" that do not break down and clog WWTP equipment.
- Residential and commercial properties need to manage their stormwater runoff on-site by changing the landscape to hold water. Need to look at this more seriously as part of WWTP wet weather flow reduction programs and the DPR watershed action plan.
- It has been brought to elected officials about investing more money in campaigns for water quality awareness
- Meetings (like this one) provide WWTP operators an opportunity to share information and discuss challenges and potential solutions with each other. A coordinated effort is beneficial to mitigating the impacts of new regulations.
- Water quality problems need to be addressed using a watershed based approach. A coordinated pollutant loading reduction program will provide the best water quality outcome for resources expended. This will include non-point source best management practices such as buffers on agricultural fields.

#### **Next Des Plaines River Watershed Planning Meeting:**

The next meeting will be held in conjunction with the September 14th Municipal Advisory Committee (MAC) Meeting, located at Central Permitting Facility, 2nd Floor, 500 W. Winchester Road, Libertyville, IL 60048, 9:00am – 11:00am. All of the watershed meeting summaries, agendas and meeting presentations will be posted on SMC's website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **MEETING ATTENDEES:**

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Adam	Mike	Lake County Health Department
Talbett	Mike	Village of Kildeer
Berns	Leslie	Lake County Forest Preserve District
Bland	Jim	Sierra Club
Dorn	Brian	North Shore Water Reclamation District
Formica	Matt	Village of Lindenhurst
Harrison	Betty	Village of Lake Zurich
Janes	Brandon	Village of Deerfield
Kendzior	Paul	Village of Libertyville
Kolb	Peter	Lake County Public Works
Leach	Nick	Village of Gurnee
McFarlane	Austin	Lake County Public Works
Pippen	Scott	Village of Lincolnshire
Reynolds	Mike	Village of Buffalo Grove
Robinson	Joe	North Shore Water Reclamation District
Talbett	Michael	Village of Kildeer
Warner	Mike	Lake County Stormwater Management Commission
Boeche	Adam	Village of Mundelein
Bounds	Dan	Baxter & Woodman
Cline	Andrea	Geosyntec Consultants
Doyle	K.C.	Lake County
Flood	Rob	North Shore Water Reclamation District
Gerleman	Douglas	Go Green Northbrook
Godshalk	Jamie	Resident
Hernandez	Charles	Village of Lindenhurst
Morthorst	Tom	Village of Third Lake
Olson	Darren	Christopher B. Burke Engineering, Ltd.
Palra	Rafal	Village of Lindenhurst
Paradoski	Gary	Aqua Vitae
Pieper	Jason	Lake County Public Works
Prusila	Mike	Lake County Stormwater Management Commission
Reed	Bud	Citizen



Last Name	First Name	Organization
Smith	Brian	AECOM
Stauber	Camille	Sustainable Places
Sweeny	Ross	Resident
Warren	Ashley	Lake County Stormwater Management Commission
Werner	Patty	Lake County Stormwater Management Commission
Witthuhn	Vern	Strand Associates
Zemaities	Mike	Lake County Division of Transportation

# **Des Plaines River Watershed Planning Meeting**

## **September 14, 2016 – 9:00 a.m. to 11:00 a.m.**

### **Lake County Central Permitting Facility, Libertyville**

#### **MEETING REPORT – Meeting held in conjunction with the Municipal Advisory Committee (MAC)**

---

##### **Introduction & Announcements:**

The meeting attendees introduced themselves at the beginning of the Municipal Advisory Committee (MAC) meeting. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the August 18<sup>th</sup> 2016 meeting summary by consensus at the Des Plaines River Watershed Planning Meeting portion of the meeting.

##### **Meeting Topic: Stormwater Management Programs and Watershed Plan Recommendations**

Mike Warner, Executive Director, Lake County Stormwater Management Commission (LCSMC) gave a brief overview of how projects that are called out as action recommendations in approved watershed-based plans are eligible IL EPA 319 project grant funding. Mike used the example of the 319 grant-funded Lake County Central Permit Facility (CPF) stormwater best management practices (BMPs), which were recommendations from the Bull Creek – Bulls Brook watershed based plan. The watershed planning status map and the Illinois Environmental Protection Agency (Illinois EPA) priority watershed planning and implementation maps were presented to the meeting attendees as well.

##### **Panel Discussion**

Mike started the Local Stormwater Programs panel discussion by introducing the panel members Darren Monico, Village of Buffalo Grove; Ramesh Kanapareddy, City of Highland Park; and Dave Brown, Village of Vernon Hills. Panelists gave brief presentations on their municipal stormwater programs, 319-funded projects in their municipalities and challenges they have come across.

##### **Darren Monico, Village of Buffalo Grove**

- Presented Killdeer Creek Streambank Stabilization at Arboretum Golf Course (Indian Creek Watershed project)
- The project included 25 foot banks, with stone toe and articulated concrete used for streambank stabilization
- Baxter and Woodman Consulting Engineers did the design and are working on project monitoring and maintenance during the 10 year operations and maintenance period
- Copenhaver Construction was contractor - still working with them to get good vegetation establishment
- Required homeowner easements - concerns with the vegetation removal that was screening for their property, but they agreed to the project

##### **Dave Brown, Village of Vernon Hills**

- Vernon Hills has followed the watershed plan for implementation projects that are grant-funded. They have leveraged \$1.7 million in grant funds for Village projects.
- Lake County Health Department (LCHD) reports also important to the Village's lake management.
- The Village of Vernon Hills was formed in 1958 and flooding is not really a problem for the Village. so they are able to focus on water quality projects.
- Presented the 2010 Hazeltine Road project that was 720 linear feet of stream restoration totaling \$350K in costs with \$188K in grant funds. The Village has reduced staff time needed for maintenance. (Prior to the project they had lots of sediment and stone accumulation in road culverts.)
- Fall 2000 implemented a project along Seavey Ditch at White Deer Run totaling \$68K with assistance of WMB funds.
- In 2007 they implemented the Harvey Lake Shoreline Stabilization. They originally planned to do a third of the shoreline, but bids came in so favorable that they did it all. North-Cook Soil & Water Conservation District provided grant funding.
- The Village uses the LCHD Lake Report as its guiding document – it is useful when talking with neighbors.

- A 2006 State and Tribal Assistance Grant (STAG) helped fund the Seavey Ditch Restoration project. Dave discussed screening removal with residents and provided two trees and a shrub for each yard to replace the invasive species that were removed. Following the completion of the project, homeowner lawn chairs faced the creek indicating their acceptance of the project.
- In 2009 the Village used a STAG grant to remove a dam on the Vernon Hill's golf course totaling \$447K cost with 50% provided by the grant.

#### **Ramesh Kanaparrady, City of Highland Park**

- Highland Park is a lakefront community with ravine and beach issues and with flooding problems.
- They are participating in a ravine restoration project with the Army Corps of Engineers (ACOE) that is underway. It took 2 years to create the temporary easements for work on 8 private properties. It is a \$1 million project with 65% / 35% cost share.
- Waiting for the development of a Lake Michigan Watershed Based Plan

#### **Take-a-ways from Panelist Discussion:**

- Maintenance is an on-going challenge for Illinois EPA 319 projects and other stormwater and drainage projects. Some communities are able to absorb maintenance through existing staff or hire a consultant. Lack of funding makes maintenance a big challenge.
  - Highland Park tries to monitor all the ravines 2x/year, but it is a challenge.
  - Vernon Hills uses a flatboat to assess stream condition and blockage issues and they inspect the bridges and culverts annually.
- All panelists agreed there should be a county-wide program to address stream maintenance.
  - Buffalo Grove has submitted a 319 grant proposal for stream restoration recommended in the Buffalo Creek Watershed Based Plan as a high priority project.
- Education of residents is an ongoing need (for ex. doggie bag disposal and not draining oil into stormwater inlets) Outreach for stormwater programs to the community includes articles and notices in the City newsletter and a website subscription service for electronic updates, and reaching out to homeowners near the project sites. Educating landowners on BMPs and keeping them updated on the project is critical for project success.

#### *Grandwood Park Dam Comment*

- GPPD meeting tonight to proceed with the emergency resolution to address whether to remove or replace the dam, which will be decided in the coming months (Mill Creek Watershed).

#### **Next Des Plaines River Watershed Planning Meeting:**

The next meeting is October 12<sup>th</sup> 2016, located at Ryerson Woods Visitor Center, 21950 North Riverwoods Rd. Riverwoods, IL 60015, 1:00pm – 3:00pm. All of the watershed meeting summaries, agendas and meeting presentations will be posted on SMC's website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **MEETING ATTENDEES:**

Last Name	First Name	Organization
Adam	Mike	Lake County Health Department
Alder	Beth	Resident
Amidei	Moses	Village of Wadsworth
Anderson	Jim	Lake County Forest Preserve District
Bicking	Steve	HR Green
Bouchard	Chris	RHMG Engineering, Inc.
Burke	Caitlin	Gewalt Hamilton Assoc., Inc.
Byrne	Rob	Village of Lincolnshire
Chung	Fred	Village of Libertyville
Corona	Joy	Bleck Engineering Co., Inc.
Crane	Juli	Lake County Stormwater Management Commission
Drabicki	Scott	Village of Gurnee

# **Des Plaines River Watershed Planning Meeting**

## **October 12, 2016 – 1:00 to 3:00 PM**

### **Ryerson Woods Visitor Center – Riverwoods, Illinois**

#### **MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about conservation efforts within the Des Plaines River watershed and discuss the vision for conservation with local conservation organization representatives.

#### **Introduction & Announcements:**

Mike Prusila, Water Resource Professional of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Mike asked meeting attendees to introduce themselves at the beginning meeting. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the September 14<sup>th</sup> 2016 meeting summary by consensus.

#### **“Tell it in Ten” Series: Lake County Forest Preserve District (LCFPD)**

Jim Anderson, Executive Director for LCFPD, opened with a description of the Ryerson Conservation Center. Jim mentioned the LCFPD currently maintains 360 buildings on LCFPD properties and would like to reduce this number over time; increasing green infrastructure and providing financial sustainability. He gave a presentation on the history of the LCFPD land acquisitions over time (1961-2016), initially focused on the Des Plaines River corridor and expanding countywide beginning in the 1970s, currently totaling nearly 31,000 acres.

#### **Meeting Topic: Conservation**

Jim Anderson gave a presentation on the LCFPD 100-year vision and Green Infrastructure Model and Strategy (GIMS). Building off the presentation on LCFPD’s history, the 100-year vision will drive future acquisitions and planning for the next 100 years. There are currently 30,531 acres of LCFPD properties and the countywide goal proposed by the Land Preservation Partners of Lake County is 60,000 acres of green infrastructure (combined with Illinois beach State Park, Illinois Nature Preserves, and local preserves) by 2030. Jim mentioned there is no new referendum in the near future for the LCFPD. The 100-year vision has three major driving concepts; 1) Leadership, 2) Conservation, and 3) People. The goals of the Vision are 1) Leadership, 2) Organization Sustainability (shift from 5 to 10-year budget) 3) Conservation, 4) Communication, Education, and Outreach, and 5) Public Access and Connections. Conservation goals were generated by staff and presented to leadership. The goal is to preserve nature at the landscape level and prevent species loss by preserving and expanding natural corridors, and specifically capturing three 10,000-acre “conservation landscapes” (not all land owned by LCFPD). Data driven conservation is the key – it’s important to have the data to see how areas are affected, so LCFPD embarked on a detailed study of green infrastructure in Lake County.

Data-gathering on regional Green Infrastructure in Northeast Illinois began with Dennis Dreher then with the Northeastern Illinois Planning Commission (now CMAP) and Chicago Wilderness’ (CW) Green Infrastructure Vision (GIV). The current version (GIV 2.2) includes the entire Chicago Wilderness region, from SE WI to NW IN. The GIV is modeled on environmentally significant cores, surrounded by hubs and networked by connecting links. CW and CMAP have attempted to monetize the value of the green infrastructure network in the region and estimated that there are, at minimum, billions of dollars of value for various ecosystem services (such as flood control, air quality, etc...). Most of the hubs in Lake County are protected by the LCFPD.

LCFPD is in the final stages of developing a Green Infrastructure Model and Strategy (GIMS) for Lake County. The end goal is to identify three (3) 10,000-acre sites around Lake County. LCFPD is currently focusing on four (4) ecological complexes – 1) Lake/McHenry, 2) Lake Michigan, 3) Upper Des Plaines River, and 4) Lower Des Plaines River. The GIMS uses the core-hub-corridor model of a green infrastructure network. The GIMS examines current conditions by community type. For example, 87% of oak ecosystems have been lost, mostly before 1939. The existing woodland hubs are mostly protected in LCFPD lands. There are many opportunities for prairie/savanna restoration. Most wetland hubs (large wetland complexes) are protected. The GIMS will be used for targeting “strategic habitat conservation areas”, largely by watershed: The Des Plaines River corridor, north central Lake County (also in the DPR watershed), the Lake-McHenry complex, and Lake Michigan. LCFPD will target these strategic areas for any acquisitions, restoration, and work with partners and neighbors.

The GIMS model and data will be available to the public either through CMAP or Lake County GIS by the end of 2016

Questions (answers given by Jim Anderson):

- 1) What does landscape scale mean?
  - a. LCFPD is looking at the entire area (i.e. Chicago Wilderness) and trying to prioritize issues in these areas.
- 2) What does GIV mean?
  - a. GIV = Green Infrastructure Vision, a concept and product similar to the LCFPD GIMS.
- 3) Are these ecological complexes identified to drive ecological restoration and financial decisions?
  - a. Yes. These are the areas the LCPFD would like to focus on.
- 4) Any work with the Hackmatack NWR in McHenry and Walworth counties?
  - a. LCFPD is aware of it and some of is tied into the Chain O' Lakes/Glacial Park area but it is not part of the current GIMS.

### **Conservation Panel Discussion:**

Jim Anderson moderated a five-member panel discussion about land conservation.

### **Panel Discussion Members:**

1. Sarah Surroz, Conserve Lake County
2. Keith Gray, Mettawa Open Lands
3. Steven Byers, Illinois Nature Preserve Commission
4. John Balaban, Master Volunteer Steward
5. Kathleen O' Connor, Libertyville Township Open Space District

Discussion questions and responses are summarized as follows:

1. Do you consider recommendations in watershed plans when developing a resource conservation and management plans, acquiring open space for conservation, or restoring/enhancing existing natural areas?
  - Sarah Surroz – as a non-profit 501c, Conserve Lake County always refers to watershed plans. They also use watershed plans to educate people about issues within the watershed and show people from where their water originates and where it's going.
  - John Balaban – He is aware of the existence of the Lake County Watershed plans and his hope is that the Cook County Forest Preserve District is referencing these as well. When new stewards are brought on board, they are educated on the watershed plans. With new restoration projects, an effort is made to keep the water on the land and maintain the integrity of the watershed.
  - Jim Anderson talked briefly about the Natural Resources Conservation Service precision conservation efforts in WI, MN, IA, and IL.
2. What are the struggles your organization faces when trying to acquire open space for conservation?
  - Kathleen O' Connor – acquisition of land (Libertyville Township) stopped a while ago. Kathleen stressed the importance of on-going communication/conversation with elected officials and the watershed plans can be used as a tool to build relationships and help educate people. Site management plans have been developed for all Libertyville Township sites.
  - Alana Bartolai (Lake County Health Dept.) – The Lakes Management Unit of LCHD provides a large amount of data for watershed plans such as shoreline erosion, chemicals present, etc. Work with residents to develop Lake Management Plans for individual lakes. *Note: Alana was not part of the panel but Jim directed the question to her.*

3. What steps is your organization taking for future conservation activities? Are you developing or have you developed a resource conservation plan to protect and enhance open space, green infrastructure and natural resources?
- Keith Gray – Costco money has been used to purchase land to maintain the communities charm. Lands are put away for perpetuity but some residents don't see this as beneficial. A constant dialog needs to take place to help people understand. In his experience, there are several people who want to do the right thing for the planet.
  - Jim Anderson – echoed similar thoughts. He mentioned that as Lake County Board members move on and off the board, the LCFPD must maintain a constant conversation about conservation.
  - Steve Byers – Steve mentioned their goal is to maintain areas long term. They look at factors such as has the site been identified by the Illinois Natural Area Inventory process, does the site contain threatened and endangers species? They work with landowners who wish to protect their land and these areas receive the highest level of protection under state statute. Steve gave the example of Grainger Woods. The LCFPD dedicated the site as an Illinois Nature Preserve and the Nature Preserve Commission worked with adjacent landowners around Grainger Woods to offer further protection.
4. Are there any upcoming water quality improvement / conservation projects you will be implementing? Will you be seeking grant funding for your project?
- Jeanette Burger – working with Jeff Weiss to present the Buffalo Creek Watershed Plan to various village boards within the watershed. It will be a hard process and long sell.
  - Jim Anderson – shared a story about patience and opportunities will present themselves. When writing grants, you should always refer to existing watershed plans.
  - Sarah Surroz – need to decide how much land do we (each organization) want to preserve and manage. She mentioned 20% might be a good goal for actual preservation; however, a lot of preservation/restoration type activities can still happen in the remaining 80% regarding water quality, implementation of BMPs, etc. She mentioned several large properties around Ryerson are good examples. Another example Sarah mentioned is working with landowners and developers regarding conservation easements.
  - Jim Anderson – the Illinois Environmental Protection Agency (Illinois EPA) has looked at increasing water quality standards. Improve habitat for flora and fauna on the 80% referenced by Sarah Surroz above. Jim mentioned the 20% probably wouldn't be enough for people and maintaining a quality of life. Also need to work with corporate partners and he cited the FedEx property as a good example of a productive working relationship.

#### **Additional Discussion Notes:**

- John Balaban mentioned he is currently involved with restoring 5,000 acres and if people are educated about conservation, they seem to understand. He mentioned citizens stop by and thank Cook County Forest Preserve staff because of the beauty provided by the resource. John gave two examples – Niles installed a large conduit to remove water from the village directly to the river during flooding. Glenview bought 12 properties to keep water and flooding in Glenview. John mentioned with climate change and experience more intense rainfall events, retaining the water in its natural flow paths is a good thing.
- Tom Chefalo, Lake County Public Building & Development (PB&D), asked if people recognize the corridors in the GIV plan and are curious what can be done to help. Jim Anderson answered that the corridors in the GIV look at species mobility and once the public has access to the mapping, citizens and other stakeholders can identify these corridors and plan accordingly. Jim mentioned the Village of Grayslake recently received the Conservation at Home certification.

Last Name	First Name	Organization
Ells	Robert	City of Lake Forest
Ende	Jeff	Village of Barrington
Firnbach	Scott	Village of Round Lake Park
Frable	Ericka	Village of Hawthorn Woods
Furlan	Frank	Waukegan & Round Lake Park
Giertych	Al	Lake County Department of Transportation
Gray	Jean	Grandwood Park Resident
Griffith	Scott	Lake County Stormwater Management Commission
Hansen	Jeff	Village of Lake Bluff
Husemoller	David	College of Lake County
Kanapareddy	Ramesh	City of Highland Park
Larson	Andrea	Manhard
Lebbos	Ed	Bollinger, Lach & Assoc., Inc.
Little	Barbara	Village of Deerfield
Marrin	Anne	Village of Fox Lake
Monico	Darren	Village of Buffalo Grove
Olson	Darren	Christopher B. Burke Engineering, Ltd.
Perry	Geoff	Gewalt Hamilton Assoc., Inc.
Prusila	Mike	Lake County Stormwater Management Commission
Reed	Bud	East Skokie Drainage District
Smith	Brian	AECOM
Steffen	Eric	Lake County Public, Building & Development
Stockley	Mark	Village of Fox River Grove
Surroz	Sarah	Conserve lake County
Talbett	Michael	Village of Kildeer
Tierney	John	Baxter & Woodman
Warner	Mike	Lake County Stormwater Management Commission
Warren	Ashley	Lake County Stormwater Management Commission
Werner	Patty	Lake County Stormwater Management Commission
Williams	Chris	Village of Lake Villa
Woolford	Kurt	Lake County Stormwater Management Commission
Yamin	Yamin	James Anderson Company
Zehner	Steve	Robinson Infrastructure Management/Village of Hainesville

# **Des Plaines River Watershed Planning Meeting**

## **November 10, 2016 – 6:00 to 8:00 PM**

### **Mundelein Park District – Mundelein, Illinois**

#### **MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about creek and stream maintenance efforts within the Des Plaines River watershed and review the stream inventory data collected on the Des Plaines River and its tributaries.

#### **Introduction & Announcements:**

Ashley Warren, Water Resource Professional of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Meeting attendees introduced themselves. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the October 12, 2016 meeting summary by consensus.

#### **Meeting Topic: Maintenance of Creeks & Streams – Landowner Roles and Responsibilities**

Ashley Warren gave a presentation explaining a riparian landowner's role and responsibilities for maintaining healthy streams, creeks, lake shorelines and riparian buffers (plant buffer). Land ownership for stream maintenance in the Des Plaines River Watershed planning area (270 miles) is divided into public lands (109 miles), private lands (144 miles) and road right-of-way (~17 miles). Maintenance of streambanks, shorelines, and riparian buffers is the responsibility of the property owner, and there are different types of maintenance and preventative measures that can be implemented; vegetation and debris management, streambank and shoreline protection, fertilizing wisely, and minimizing stormwater runoff.

#### **Can you be a Steward for Water Quality?**

Ernesto Huaracha, Water Resource Professional with SMC, gave an overview on how to be a good steward for water quality, and conditions that impact the quality of our water. Point and non-point source pollution contribute to erosion, increased turbidity, excess nutrients from fertilizers and pesticides, chlorinated oil drainage and waste, polycyclic aromatic hydrocarbon/coal tar and vegetation degradation. As landowners, we can use best practices to reduce pollution; minimize stormwater runoff, reduce and prevent pollutants from entering streams, and protect/support/create native plant buffers and plantings. All of those best practices to reduce pollution can be accomplished through everyday good yard/housekeeping practices. Landowners also have the capability to report concerns they see in Lake County by using the "Report a Concern" page on Lake County's website:

<https://il-lakecounty.civicplus.com/3637/Report-a-Concern>.

#### **"Tell it in Ten" Series: Mundelein Park District**

Margaret Resnick, Director for Mundelein Park District, gave a brief overview of recent projects the Mundelein Park District has implemented. Some of the best management practice (BMP) projects Mundelein Park District have installed include rain gardens, roadside/residential swales, aquatic weed harvesting, lake shoreline and stream stabilization, native plant buffers and incorporating prescribed burns into their maintenance plans (120 acres). These projects have been made possible by support by local sponsors and organizations such as Lake County Stormwater Management Commission, Local Municipalities, and the Illinois Environmental Protection Agency (Illinois EPA) – Section 319 Grants.

#### **Des Plaines River Watershed Stream Inventory Data**

Jeff Laramy, GIS Analyst with SMC, gave a presentation about SMC's recent stream inventory data collected within the Des Plaines River watershed planning area. The stream inventory is performed to collect data that will be used in the watershed planning process to make recommendations and identify area for possible restoration. The data collected is based on a physical assessment of the river and tributaries, which includes channel conditions and identifying hydraulic structures, point discharges, land use and vegetative cover and debris jams. Approximately 246 miles of stream have been inventoried in the Des Plaines River watershed planning area. Data was presented for each of the stream inventory criteria – channelization, erosion, hydraulic structures and problems, discharge points and problems, and debris jams. Data collected translates into recommendations in the action plan to identify areas for possible stream restoration.

Neil Schindelar, Engineering Technician with SMC, went through a brief demonstration of the Des Plaines River Stream Inventory Web Application that includes all of the recent stream inventory data collected by SMC. This



application has the capacities to allow the public to see where any problem areas along the river and streams were observed, as well as, see photos of the problem areas.

Questions/Comments (answers given by SMC staff):

- 1) What should the public look for to report (on Report a Concern) to Lake County's website?
  - a. For Stormwater Management concerns, problems such as illicit discharges, erosion, construction/development, flooding, etc...
- 2) What is being done to reach out to landowners/villages with the data collected – debris jams?
  - a. SMC has contacted villages in the past to report larger debris jams to them for possible removal.
  - b. How can we (SMC) communicate that to whoever is performing the maintenance to take care of those (debris jams)? SMC sent out a riparian landowner informational mailing in the beginning of the Des Plaines River watershed planning process – February 2016.
  - c. The difficult part is property owners are unaware that they are responsible for maintenance of their creeks and streams and there is a lack of funding to perform larger maintenance activities. How do you make a connection with the landowners – again lack of funding to help or provide outreach.
  - d. Once stream inventories are done they can become static (no updating information) and it would be a good idea to keep updating it with new information (i.e. SMC is told when debris jams are removed, so they can be removed from the inventory).
- 3) Trees near streambanks - canopy from trees prevents vegetation from taking hold. Wadsworth will be doing some channel clearing on three tributaries and getting rid of the trees along the streambanks
  - a. There is no blanket statement that all trees along streambanks are bad. Trees can provide benefits, but some invasive junk trees are removed from some streambank stabilization projects (current Bull Creek Streambank Stabilization Project, Beach Park, Illinois)
- 4) The LCFPD Steward Program has held over 40 clean-up days this year; would they be able to send SMC information/photos of new information?
  - a. Yes! The public can use tablets or (at least 3G) smartphones to send SMC information- that would be very helpful and make the Stream Inventory application a living document.

#### **Next Des Plaines River Watershed Planning Meeting:**

The next meeting will be held on Thursday, December 8<sup>th</sup> 2016 at Tempel Farms, 17000 W. Wadsworth Road, Old Mill Creek, IL 60083, 12:00pm – 2:00pm (includes free lunch). Must RSVP with Dijana Silber ([dsilber@lakecountyil.gov](mailto:dsilber@lakecountyil.gov)) to attend. All of the watershed meeting summaries, agendas and meeting presentations will be posted on SMC's website: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **MEETING ATTENDEES:**

Last Name	First Name	Organization
Adler	Beth	Des Plaines River Watershed Workgroup (DRWW)
Amidei	Moses	Village of Wadsworth
Anderson	Jim	Lake County Forest Preserve (LCFPD)
Anderson	Ders	Openlands
Baade	Tony	Loch Lomond Property Owners Association (LLPOA)
Bailey	Clint	United States Geological Survey (USGS)
Gretz	Helen	Lake County Forest Preserve District
Heilemann	Rosemary	Lake County League of Woman Voters
Huaracha	Ernesto	Lake County Stormwater Management Commission (LCSMC)
Klonowski	Paul	Lake County Forest Preserve District's Des Plaines River Steward Program
Lageman	Jon	United States Geological Survey (USGS)
Laramy	Jeff	Lake County Stormwater Management Commission (LCSMC)
Papa	Jan	Bluestem Ecological Services
Pfeil	Bob	Village of Buffalo Grove
Prusila	Mike	Lake County Stormwater Management Commission (LCSMC)
Ratz	Rob	Lake County Forest Preserve District's Des Plaines River Steward Program
Schindelar	Neil	Lake County Stormwater Management Commission (LCSMC)
Smith	Brian	Tollway
Urbanozo	Gerard	Lake County Health Department (LCHD)
Wade	Joe	City of Prospect Heights
Warren	Ashley	Lake County Stormwater Management Commission (LCSMC)

Last Name	First Name	Organization
Werner	Patty	Lake County Stormwater Management Commission (LCSMC)
Wittenberg	Bill	Libertyville Resident

# **Des Plaines River Watershed Planning Meeting**

## **December 08, 2016 – 12:00 to 2:00 PM**

### **Tempel Farms – Old Mill Creek, Illinois**

#### **MEETING REPORT**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about a variety of agriculture and equestrian practices within the Des Plaines River watershed and discuss how they influence water quality and natural resources.

#### **Introduction & Announcements:**

Patty Werner, Planning Supervisor of the Lake County Stormwater Management Commission (SMC), welcomed participants to the meeting. Patty gave a brief overview of the Des Plaines River watershed planning meetings this year and the purpose of the planning efforts. Patty mentioned attendees at the meeting that are members of the Des Plaines River Watershed Workgroup (DRWW) and their monitoring efforts in the watershed. Larry Leffingwell and Tempel Farms were thanked for hosting this watershed meeting.

Meeting attendees introduced themselves. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the November 10, 2016 meeting summary by consensus.

#### **“Tell it in Ten” Series: Tempel Lipizzans**

Emily Riccio, Program Coordinator of the Tempel Lipizzans, gave a presentation of the history of Tempel Farms and how Tempel and Esther Smith created the Tempel Lipizzans organization we know today. The presentation highlighted the transportation of Lipizzans from Austria to America and the careful management, passion and training involved with raising and performing with Lipizzan horses.

#### **Meeting Topic: Agriculture in the Des Plaines River Watershed**

Patty Werner gave a presentation showing the current and future land use projections for the watershed – in particular changes in agriculture in the Des Plaines River watershed. Maps including Illinois Environmental Protection Agency (Illinois EPA) Water Quality Impairments showed agriculture listed as a source of pollution impairments in 4 stream/river segments and 12 lakes in the watershed. Agriculture best management practices (BMPs) play a big role in keeping soil in place and maintaining adequate moisture and nutrients for crop production without polluting waters. Categories of different agriculture BMPs were presented with examples pictured including: best farming practices such as conservation tillage and nutrient management; building soil and reducing erosion with cover crops; managing and treating overland and underground stormwater flows; equestrian facility practices; protecting agricultural streams; and managing invasive species in unfarmed natural areas.

#### **Agriculture Panelists & Discussion**

##### ***Chris Cubberly, Tempel Organics Supervisor***

Chris gave an overview of the Tempel Organics operations, emphasizing the importance of soil based health. Cover crops are a large part of their operations and keeping the soil in place (8 acres of cover crops last season). Some of the cover crops used at Tempel Farms include: ryegrass, hairy vetch, buckwheat and winter wheat. Some of the other activities Tempel Organics implement include:

- Installation of some drainage tile for small areas to maintain food crop productivity,
- utilizing manure and compost in their operations,
- tilling dead plant material back into the ground and
- native buffers are installed on the property

Chris utilizes a farm stand, farmer’s market, and whole sales to stores to promote and sell the Tempel Organics produce. He believes that local communities supporting local farms can make the difference and promote more local jobs.

##### ***Matt Ueltzen, Lake County Forest Preserve District (LCFPD)***

Matt gave an overview of the Lake County Forest Preserve’s (LCFPD) Farm Program. Matt presented LCFPD’s policy and interim management strategy for continued agriculture use on lands owned by the LCFPD until a permanent District use is implemented. An overview was given on the Farm Program procedures, beginning with the public bid process to the farm license and agreement requirements. Currently, there are 2,508.93 acres of LCFPD Farm Program areas in the watershed; statistics on the land use and average cost per acre is provided in the PowerPoint presentation.

LCFPD is currently involved with an Illinois EPA 319 Grant (Clean Water Act) in conjunction with SMC; Dutch Gap Agricultural BMP Implementation Project. This project involves implementation of agricultural conservation practices such as installing grassed waterways, filter strip, and a drain tile repair on five different farm sites.

***Geoff Milne, Agricultural Supervisor Tempel Farms***

Geoff oversees 1,800 acres of row crop (corn-soybean rotation) operations, including 150 acres of wheat and 250 acres of hay for the Tempel Lipizzans. The wheat fields are no-tillage operations following soybeans and most of the soybean fields following corn (unless ruts in the field occur), which helps with disease and pest management. Tempel Farms has implemented several agriculture conservation practices, including building dry stone dams, waterways, no-till operations, fixing broken drain tiles and trying cover crops for the first time last fall – clover, ryegrass (re-used from Tempel Organic seeds), hairy vetch and tillage radishes. Some of the problems they face with conservation practices is the cover crops don't always die off or don't kill off too easy for Spring.

***Joe Lodesky, Gurnee Farmer and Agrarian Conservationist***

Joe is a 5<sup>th</sup> generation family farmer on the same land as he grew up on (173 years of family ownership). Joe has been in charge of the land operations for 20 years. Joe gave some history of the farming operations, including problems they faced over time; wheat on wheat farming which did fail and putting manure from their cattle on the fields in winter and having it wash away in the Spring. In general, the past farming system used to be all about productivity and using up all of the nutrients; that has changed now. Since then, Joe has done research on conservation farming (referencing books such as “Biological Farmer”) and is implementing best practices such as cover crops, repairing drain tiles and focusing on soil health in general. Joe showed some maps of his property and the adjacent properties from 1939 and recent. Those maps showed the land use changes that have occurred.

***Larry Leffingwell, General Manager Tempel Farms***

Larry gave a brief overview of Tempel Farms and some of the conservation practices that are undertaken on Tempel Farms. Some of the history: Larry shared that the lands Tempel Farms owns keep all of the family names with the properties; and some of the properties have been hosting traditional fox hunts since the 1940s.

It was noted that farming is a lot cleaner than it used to be. Some of the problems he has seen:

- non-native species – Autumn Olive,
- regulation restrictions that may be disincentives for investing in conservation practices, and
- challenges with getting “older” farmers to include more conservation practices (cover crops, no-till in Fall, dry dams).

Larry emphasized that Tempel Farms is trying to transition into responsible row crop operations; with a goal of one day becoming self-sustaining. Larry would like to have more environmental aspects included within the Village of Old Mill Creek Comprehensive Land Use Plan.

**Panel Discussion:**

- What is No-Till?
  - Not tilling the land at all.
- Do regulations hold you back from doing conservation practices?
  - Yes, if you have land. It is hard to work with certain government entities. Example given was problems that came up with Larry trying to build his hay shed and the drainage requirements.
- Do you feel that future land use for agriculture will be going down? Is that accurate?
  - At some point, but Lake County has two rarities together water and good soil to grow in – compared to California who is running out of useable water.
- Discussion:
  - Point to make that moving food from coast to here when you can have it grown down the street (Farm to Table Concept). Grow Food Here and Eat it Here.
  - Tom Doolittle has had dairy cows for 42 years with a semi-organic farming system. He has done 25 years of no-till farming into corn and soybeans. Overall farmers need to generate enough money to live on and farmland is disappearing.
- How late into the year can you grow to buy and eat locally (Tempel Organics question)?
  - All year. With hoop houses you can continue to grow produce.
- Jim Rospopo (McHenry-Lake USDA Natural Resources Conservation Service) brought up a good reference for the meeting attendees: David Brandt an Ohio farmer emphasizes no-till, cover crops and decreases

fertilizer use (lower costs) to increase organic matter greatly. This has allowed him to get into the fields sooner after a rain event and have more active cover – less ground that needs to be worked.

All of the watershed meeting summaries, agendas and meeting presentations will be posted on SMC's website:  
<http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

## MEETING ATTENDEES:

Last Name	First Name	Organization
Aaberg	Nathan	Liberty Prairie Foundation
Adam	Michael	Lake County Health Department
Adler	Beth	Des Plaines River Watershed Workgroup (DRWW)
Amidei	Moses	Village of Wadsworth
Anderson	Jim	Lake County Forest Preserve District
Brandes	Ryan	Lindenhurst Environmental Committee
Chefalo	Tom	Lake County Planning, Building and Development Department
Cubberly	Chris	Tempel Organics
Custic	Melissa	The Morton Arboretum / Chicago Region Trees Initiative
Doolittle	Tom	Grubb School Drainage District
Dorn	Brian	North Shore Water Reclamation District
Frank	Brian	Lake County Planning, Building & Development
Garrigan	Michael	Village of Antioch
Geiselhart	Chris	Lake County Audubon / Bull Creek Bull Brook Stakeholder
Geiselhart	Paul	Lake County Audubon
Hart	Sandra	Lake County Board Dist. 13
Heilemann	Rosemary	Lake County League of Woman Voters
Himmelstein	Hal	Resident and Volunteer Steward
Huaracha	Ernesto	Lake County Stormwater Management Commission
Isaacson	Kim	University of Illinois Extension
Kerkman	Randy	Village of Bristol
Laramy	Jeff	Lake County Stormwater Management Commission
Leffingwell	Larry	Tempel Farms
Lodesky	Joe	Gurnee Farmer and Agrarian Conservationist
Maine	Ann	Lake County Board Dist. 21
Martini	Judy	Lake County Board Dist.5
Meents	Haley	Lake County Communications
Milne	Geoff	Tempel Farms
Morthorst	Tom	Village of Third Lake
Moss	Glen	Resident and Volunteer Steward
Neal	Marty	Libertyville Township Highway Dept.
Paap	Kathy	Donald Hey & Wetlands Research Inc
Papa	Jan	Bluestem Ecological Services
Pedersen	Alfred	Resident
Pedersen	Linda	County Board Dist.1
Pfeil	Robert	Libertyville Resident
Riccio	Emily	Tempel Lipizzans
Robinson	Joe	North Shore Water Reclamation District
Rospopo	James	USDA Natural Resources Conservation Service
Scott	Les	Resident and Volunteer Steward
Snyder	Rebekah	Lake County Forest Preserve District
Surroz	Sarah	Conserve Lake County
Ueltzen	Matt	Lake County Forest Preserve District

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Varga	Ernest	McHenry County
Warren	Ashley	Lake County Stormwater Management Commission
Werner	Patty	Lake County Stormwater Management Commission
Weskerna	Ed	LC Soil & Water Conservation District
Wilson	Donald	Resident and Volunteer Steward

**DES PLAINES RIVER WATERSHED MEETING AGENDA**  
**CENTRAL PERMIT FACILITY**  
**500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**FEBRUARY 9, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the current state of our lakes, best management practices for lakes, and available lakes management programs within the Des Plaines River watershed.

**1. *Introductions and Announcements***

- a. Introductions-Patty Werner led self-introductions.
- b. Review and accept December 8, 2016 meeting summary-The meeting summary was accepted by consensus.
- c. Mike Adam announced that LCHD will be hosting an evening meeting on lakes at 7 PM March 7<sup>th</sup> at the Central Permit Facility.

**2. *“Tell it in Ten” Series: Lake County Health Department (LCHD)***

- a. Mike Adam, Senior Biologist, LCHD, gave a presentation focusing on the history of the health department, specifically as it relates to lakes. It was established in 1956 by referendum and its first annual report described one of its objectives as the conservation of lakes, primarily related to the effect of septic systems and wastewater effluent. Previous sewage treatment discharge to lakes in the past have left legacy pollution problems in lakes such as Long Lake and Third Lake nutrient issues. Septic systems right next to lakes - have created lake pollution problems. Many septic systems are still the original - have not been replaced. Many were designed for seasonal use only. As the county has grown, the Department’s range of services has diversified, and the Lakes Management Unit has grown into the Ecological Services division, and conducts swimming pool inspections, vector analysis (mosquitoes and ticks, e.g.), beach monitoring, and lake monitoring. In fact, the Ecological Services division monitoring over 25% of the licensed beaches in Illinois.

**3. *Lakes Management Plans & Programs***

- a. Alana Bartolai, Water Quality Specialist, LCHD presented an overview of Des Plaines watershed lakes and lake programs in the County.
  - Current state of our lakes-94 lakes >6ac. in the Des Plaines watershed in Lake County, a few lake origins: glacial, impounded, borrow pit (excavated). ~60 lakes in DPR watershed have a designated use impairment. Typically, the causes are fecal coliform bacteria, phosphorus, total suspended solids, and aquatic plants (too many or too few). Uses that may be impaired are primary and secondary contact recreation, aquatic life, aesthetic quality, and fish consumption.
  - The lakes are ranked on water quality and the twelve lakes ranked with the best water quality are newer lakes developed within the last 40 years and consist mostly of reclaimed borrow and gravel pits.
  - Source of impairments- Phosphorus impairments may be due to internal loading (seasonal cycling within the lake) or external loading (sources drain into the lake from the surrounding watershed or are inputs from humans). High phosphorus can be problematic as it may lead to excessive aquatic plant growth or algae blooms, which in turn may result in periods of low dissolved oxygen levels, which in turn may result in fish kills. Most lakes in the County have Total Phosphorus levels above 0.05 mg/L (Lake County lakes average 0.068 mg/L overall), which is the Illinois state water quality standard for lakes. Lakes with the lowest phosphorus levels in the Des Plaines Watershed are former gravel pits (“young” lakes with little nutrient accumulation thus far) and some glacial lakes (those that tend to have smaller tributary watersheds). Total Nitrogen >0.3 mg/L may also result in algae blooms, and nitrogen is another nutrient of concern in Lake Co. lakes. Total suspended solids (affecting water clarity), dissolved oxygen (below 5.0 mg/L at 1-foot depth), and pH (>9 or <6.5, may

be affected by alum treatments over the short-term), may also cause water quality impairments. Aquatic plants are an important component of lake health, but too few, too many, or invasive species may cause impairment. IDNR recommends 20-40% lake bottom coverage with aquatic vegetation for healthy fish habitat. E. coli bacteria from avian sources (gulls, waterfowl), septic, and other causes can cause sickness at swimming beaches and result in water quality impairment.

- How-To guide to monitor your lake-Beyond the LCHD monitoring reports, there are other monitoring efforts in which lake communities can participate & gather more data for their lake. Volunteer lake monitoring program is a statewide program, most gather secchi depth, some gather tier 2 water chemistry. There are 23 lakes in the entire Des Plaines Watershed (all IL counties) that participate. Inlet sampling: Forest Lake samples inlets to the lake to determine where pollutants may be coming from. LCHD Lab fees: Chloride = \$12/sample; P = \$18/sample; TSS = \$15/sample. The LCHD is participating in a Lowrance loaner program, where volunteers can collect sonar data to map plant coverage/lake bottom. Beaches serving more than 5 people should be licensed by IDPH. If you suspect a harmful algae bloom (blue-green algae/cyanobacteria), send a photo to LCHD, and they will follow up.
- Lake-related Best Management Practices (BMPs) include watershed (things that can be done upstream of a lake) and in-lake (treatments to the lake itself).
- Lake and Aquatic Management Plans-LCHD is encouraging lake associations to develop and implement lake management plans for identification and adaptive management of priority lake issues. They are creating a template for lake associations to create individual lake management plans. Additionally, the Des Plaines Watershed Plan will include recommendations for specific lakes, so it is important to provide feedback to the planning group on priorities for the next 10 years.

Q-What is the overall condition of lakes in Lake County and how has it changed over the last 25 years or so?

A-Most lakes are impaired, probably not much changed in 25 years. Some impairments such as internal phosphorus loading will be difficult to remove from the list.

Q-Is there a reason or significant difference between lakes that are impaired & not impaired?

A-Many of the lakes that are not impaired are borrow pits/former gravel quarries that are not old enough to have accumulated nutrients or are deep glacial lakes that are somewhat more resistant than shallow lakes.

Q-Does aeration solve impairments?

A-Sometimes, usually they are an attempt to prevent stratification, so if that contributes to impairment, it may be helpful. Third Lake has had decent success with some very large aerators.

#### **4. Lake Association Panelists & Discussion**

Mike introduced the panelists and each gave an overview of their lake, lake history, management history, issues, successes, and challenges.

- a. Tony Baade, Loch Lomond Property Owners Association-Loch Lomond is a relatively shallow impoundment (max depth ~9 feet) that is about 60 years old with a very good balanced fishery and active monitoring program since the 1990s (fish surveys since the mid-1980s). Non-motorized boating, swimming, and fishing are major uses. The LLPOA is 600 households with annual dues around \$300/year. Biggest successes are getting resident volunteers to stick with collecting lake data and finally figuring out some management measures that are successful at goose discouragement. Challenges include management of stormwater system in surrounding watershed and algae blooms (result of legacy nutrients from watershed runoff). The association has a stenciling program in place.



Q-Do you contract with LCHD to monitor inlets?

A-Yes, they monitor 4 inlets to the Lake

Q-Have you considered/tried dredging?

A-No, prohibitively expensive on a lake-wide scale.

- b. Greg Denny, Diamond Lake Preservation Alliance-Diamond Lake is a glacial lake that was developed in the 1<sup>st</sup> half of the 20<sup>th</sup> century as a resort/summer home area. Since that time, motorized boating has been a major use on the lake, along with fishing, swimming, and non-motorized boating/paddle boarding, etc... Sedimentation is major issue at the moment, along with potential use conflicts between motorized and non-motorized users. Diamond Lake Preservation Alliance was created to provide a forum for lake management, Hey & Assoc. created lake management plan to provide guidance on weed treatments. Impaired for phosphorus, although that seems to be dropping in levels, also invasive species are present (Eurasian watermilfoil, curlyleaf pondweed, zebra mussels, and recently gizzard shad). Muskellunge have been stocked as a predator to suppress gizzard shad cycles. The association has a stenciling program in place.

Q-are there evident user conflicts?

A-the LCHD lake reports indicate the relationship between horsepower and depth required to mitigate resuspension of sediment. No-Wake areas are often disregarded.

- c. Rob Flood, Gages Lake Conservation Committee-Gages Lake is a glacial lake with a relatively small watershed. GLCC formed in early 1970s primarily to address aquatic plant management. Boating, fishing, & swimming are major uses, there are no horsepower restrictions on motor boats. The GLCC board is elected by citizens that have lake rights and supported by voluntary dues. This funding model has worked better than fundraising. Most of the budget is spent on aquatic plant management (primarily Eurasian Watermilfoil). Whole-lake treatment has not been as successful as spot treatments in boating and swimming areas. Major challenge is that Gages Lake is unincorporated and GLCC is advisory and has no enforcement authority or ability to pass ordinances that would codify management objectives. Stormwater management in the tributary watershed is also an issue, would like to work with Township & county to reduce stormwater and chloride inputs. Carp are also a challenge along with zebra mussels, the GLCC sponsors a carp fishing derby and works with DNR on a carp electro-fishing removal program. Also sponsor adopt-a-highway cleanup along US 45. Recently re-introduced white water lily. GLCC wants to develop a written lake management plan.

Q-Are milfoil weevils still used and are they successful at control?

A- Some lakes have attempted use, but they can be expensive to stock and success has been limited or cyclical, with weevils being effective some years but not others.

Q-How do you make the carp derby popular

A-Do it on free fishing weekend (don't require IL fishing license) Partner with Wildwood PD and Lions Club and give out prizes. Get about 50 carp out. The 50 carp equate to approximately 84.5 lbs of phosphorus removed due to carp due phosphorus contribution in waste and residual buildup internally.

Q: What do you do with the carp that is removed?

A: Give the carp to some local organic farmers who use as fertilizer.

- d. Tom Morthorst, Village of Third Lake, Lakes Commission-Oversees Third & Druce Lakes and is advisory to Village Board. Third Lake is motorized, Druce is non-motorized. Both in VLM program. Third is the deepest inland lake in the county and has the highest # of fish species in the DPR watershed. Mill Creek

runs into Third Lake and received effluent from the Grayslake WWTP during mid-20<sup>th</sup> century, resulting in nutrient loading to lake. 25% of Village budget is spent managing lakes, most expensive aspect is aeration, followed by plant control and fish stocking. Both lakes are listed as impaired, both have zebra mussels. Runoff is a concern; Village was 1<sup>st</sup> in Lake Co. to adopt a municipal phosphorus-free fertilizer ordinance. Lakes Commission is now addressing chloride and will be making recommendations to Village Board soon. Replacing Third Lake dam in 2017, will be electronic operation and remote-controlled, should allow preemptive opening of gates to provide more stable water levels during runoff events and reduce shoreline erosion. In 1990s, there was a sequence of massive gelatin-like algae blooms as a result of bath beads, that ultimately required dredging and the installation of large aerators (the size of a truck bed). Capital cost for just aerators was \$100,000. Dredging took 2 summers, and combined with aeration has been largely successful in preventing subsequent blooms.

Q-Do all the lakes have public access?

A- Diamond & Gages have fee access, Third, Druce, and Loch Lomond are completely private.

Q-Is there any education at boat launches?

A-Yes, at Diamond & Gages regarding invasive species.

Q-Is there an attempt to educate the younger generation on lake management issues?

A-LLPOA has done some Eagle Scout projects, there are stormsewer stenciling projects, Diamond Lake has sent leaflets to owners. GLCC uses carp derby as an education/outreach opportunity. Obviously, this is an ongoing need.

Q-Village of Vernon Hills is replacing a stormsewer outfall into Evergreen Lake. What are best BMPs at outfall?

A-Probably requires additional engineering study, but some pretreatment of water that can contact vegetation for some time prior to discharging into main lake.

*Patty Werner asked the meeting participants to send their own lake stories to her or Ashley Warren so that they can be considered in the plan.*

#### MEETING ATTENDEES:

Last Name	First Name	Organization
Adam	Michael	Lake County Health Department
Adler	Beth	Des Plaines River Watershed Workgroup (DRWW)
Anderson	Jim	Lake County Forest Preserve District
Baade	Tony	Loch Lomond Property Owners Association
Blake	Kelly	Integrated Lakes Management (ILM)
Bland	Jim	Sierra Club
Broderick	Colleen	Wildwood Park District
Brown	David	Village of Vernon Hills
Bundalo	Dan	Wildwood Park District
Bundalo	Cindy	Valley Lake Committee
Carrier	Kevin	Lake County Department of Transportation
Chefalo	Tom	Lake County Planning, Building and Development Department
Denny	Greg	Diamond Lake
DeVore	Sheryl	Lake County News
Dicke	Faith	Crooked Lake (East Shore)
Flood	Rob	Gages Lake & North Shore Water Reclamation District
Fritz	Dean	Wildwood Park District
Giertich	Al	Lake County Department of Transportation

Last Name	First Name	Organization
Huaracha	Ernesto	Lake County Stormwater Management Commission
Jakubicek	Frank	IDNR -Fisheries
Kippy	Jim	
Kubillos	Sandy	Integrated Lakes Management (ILM)
Laramy	Jeff	Lake County Stormwater Management Commission
Lebbos	Ed	Bollinger, Lach & Assoc., Inc.
Marrs	Joseph	Cedar Crossing HOA
Miceli	Tom	Sierra Club & Lake County Forest Preserve River Steward
Miceli	Kathy	Sierra Club & Lake County Forest Preserve River Steward
Morthorst	Tom	Village of Third Lake
Moss	Glen	Resident and Volunteer Steward
Nelson	John	Lake County Forest Preserve District
Paap	Kathy	Donald Hey & Wetlands Research Inc.
Papa	Jan	Bluestem Ecological Services
Pfeil	Robert	Libertyville Resident
Prusila	Mike	Lake County Stormwater Management Commission
Resnick	Margaret	Mundelein Park District
Robinson	Joe	North Shore Water Reclamation District
Rodrigues	Gabriel	Vernon Hills Park District
Schimanski	David	Village of Deerfield
Sweeny	Ross	Niles Resident
Weik	Ken	Bull Creek Homeowners Assn.
Werner	Patty	Lake County Stormwater Management Commission
Wilson	Donald	Resident and Volunteer Steward
Wolff	Michael	Lake County Grading Company
Zemaitis	Mike	Lake County Department of Transportation
Zink	Sarah	Integrated Lakes Management (ILM)

**DES PLAINES RIVER WATERSHED MEETING REPORT**  
**CENTRAL PERMIT FACILITY**  
**500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**MARCH 9, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the Des Plaines River watershed settings and characteristics including impacts of settlement, topography, soils, subwatersheds, drainage systems and current flood problem areas within the Des Plaines River watershed.

**1. *Introductions and Announcements***

- a. Introductions- Ashley Warren & Patty Werner led self-introductions.
- b. Review and accept February 9, 2017 meeting summary-The meeting summary was accepted by consensus.

**2. *“Tell it in Ten” Series: Libertyville-Mundelein Historical Society***

- a. Jenny Barry, President & Local History Librarian, gave a presentation on the Libertyville-Mundelein Historical Society. The Libertyville-Mundelein Historical Society was officially founded in 1955. The Libertyville-Mundelein Historical Society archives are housed in the Cook Home, contain thousands of photographs, postcards, and documents. The Cook Home stands as a wonderful tribute to the dedicated members of the Libertyville-Mundelein Historical Society who continue to embrace a mission of preservation that benefits our extended community.

Jenny described early settlement history, demographic changes, the development of Libertyville and important historical events along the Des Plaines River in Lake County, IL from present day Half Day to north of Libertyville. She highlighted the backgrounds, exploration and settlement of early European pioneers Daniel Wright, Hiram Kennicott, Ransom & Richard Steele, George Vardin, Elconah Tingley, and Archimedes Wynkoop.

**3. *Watershed Setting & Characteristics***

- a. Patty Werner, Planning Supervisor; and Jeff Laramy, GIS Analyst, SMC outlined the Des Plaines River watershed planning efforts and described the watershed setting and characteristics.

Patty’s presentation included the watershed planning background of Illinois EPA funding secured to cost-share the watershed plan and cooperating with the Des Plaines River Watershed Workgroup (DRWW) and other stakeholders to develop a plan for a watershed that spans two states and two Illinois counties. The presentation gave an overview of the geology of the watershed that shaped the landscape, Pre-European settlement landcover and a brief overview of people in the watershed over time and their relationship to changing the landscape to what we know today. The current and future demographics were outlined with soil and topography maps (basis for watershed, subwatershed and drainage catchment delineation).

Jeff’s presentation on the Des Plaines River subwatersheds – Upper Des Plaines River, Indian Creek, North Mill Creek/Dutch Gap Canal, Mill Creek, Buffalo Creek, Lower Des Plaines River, Bull Creek, Newport Drainage Ditch, Aptakisic Creek and Bull’s Brook. The presentation included an overview of the watershed further divided into 422 small drainage catchments based on surface topography, the 131-square miles of the planning area that has storm sewers that transport runoff (56% of the planning area), and the current municipal and township jurisdictions in the watershed planning area. Jeff also demonstrated on-line web applications for the subwatersheds/jurisdictions and the detention basin inventory that are linked on the SMC website.

Q-Is SMC checking for deed restrictions for the detention basin inventory web application?

A- No, SMC does not look at ownership information, but ownership will be important for implementing maintenance and retrofits included in the watershed action plan.

Q-Is there usually an emergency overflow area noted on the detention basin inventory (out in the field)?

A- Yes, it is a feature that is noted on the field forms and transferred into the web application. Many times, it is not an obvious structure, but instead an area that may be graded lower for overflow.

Q- Are detention ponds (basin) designed for overflow? Example given: It was noted that Route 120 and O'Plaine Road detention pond (basin) water levels always stay low. Where does the water go after it enters the detention basin?

A- Every detention basin has a design capacity for water volume. It is a good thing that the detention basin is not overflowing and the water levels are generally low. The water leaves the basin through an outlet control structure once the water level reaches a certain height or it may infiltrate/evaporate over time.

Q- Does the detention basin inventory map have storm sewer network data?

A- Currently no, but it is a good idea for the future. SMC does not have all the watershed municipality data for the storm sewers. Some municipalities do not have the staff capacity or money to collect that data.

Q- Are the web applications available to the public?

A- They will be after today's presentation. SMC will get the links posted on the website, on the Des Plaines River watershed webpage. <http://www.lakecountvil.gov/2376/Des-Plaines-River-Watershed>.

- b. Sharon Osterby, Water Resources Professional, SMC presented an overview of the flood problem areas update.

Sharon's presentation began with a summary of what the flood problem area update is and why it is necessary, as well as, who received a flood problem area update letter and form in the watershed. The sources of flooding in flood prone areas include riverine flooding, depressional flooding, urban flooding (inadequate drainage) and sanitary sewer flooding (backups). Since 1995 when the first inventory of flood problem areas began, SMC has identified 229 flood problem areas in the watershed. What the 2016 flood problem area update has shown is an increase in flood problem areas and what sources of flooding have occurred.

#### **4. Year 1 Progress Report on DPR Watershed Plan & Discussion**

- a. Ashley Warren, Water Resources Professional, SMC summarized the Year 1 Progress Report for the Des Plaines River watershed. (see attached report)

SMC questions directed to meeting attendees regarding the watershed planning process and meetings.

Q - What do you (meeting attendees) like or not like about the meetings? What are we doing right? Any improvements?

A- Like the variety in topics, they are good and very educational.

Q - Has anyone worked on designing and implementing stormwater best management practices (BMPs)?

A- A master gardener was present at the meeting, and the University of Illinois- Extension master gardeners maintain the Lake County Central Permit Facility rain garden BMP in front of the building.

Patty - SMC is looking for potential small drainage areas such as lakesheds to develop conceptual designs and budgets for BMPs as part of the Small Watershed Assessment and Action Plan (SWAPP)

pilot program. Anyone interested can contact Ernesto Huaracha, Water Resource Professional, SMC, [ehuaracha@lakecountyil.gov](mailto:ehuaracha@lakecountyil.gov) 847-377-7715 for more information or to express interest in participating in the program.

#### Meeting Attendees Questions

Q – Any more thought of directing effluent water from the wastewater treatment plants to Lake Michigan instead of the Des Plaines River to reduce flood flows in the Des Plaines?

A – Not at this time.

Meeting attendee suggestion: SMC presenting to the meeting attendees potential granting agencies that can help fund/resolve our watershed issues.

Comment: SMC is currently compiling a master table of potential funding sources for green infrastructure and other BMPs that will be linked on the Des Plaines River watershed webpage for public use. SMC will also be hosting a meeting later in 2017 on potential funding sources. It was suggested to move this meeting forward on the topic schedule and include representatives of the different funding sources as meeting presenters.

#### 5. Next Meeting & Remaining Questions

- a. Next meeting: April 13, 2017 at Central Permitting Facility, 2nd Floor, 500 W. Winchester Road, Libertyville, IL 60048; 6:00pm -8:00pm. For more information visit:  
<http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### MEETING ATTENDEES:

Last Name	First Name	Organization
Adam	Michael	Lake County Health Department
Adler	Beth	Des Plaines River Watershed Workgroup (DRWW)
Anderson	Jim	Lake County Forest Preserve District
Baade	Tony	Loch Lomond Property Owners Association
Barner	Allie	Natural Resource Conservation Service (NRCS)
Barry	Jenny	Libertyville-Mundelein Historical Society
Batz	Bill	Prairie Crossing
Berg	Keith	Mundelein Resident
Bland	Jim	Sierra Club
Blank	Richard	Resident
Brady	Kathy	Prospect Heights Resident
Brandes	Ryan	Lindenhurst Environmental Commission
Burke	Michael	Christopher B. Burke Engineering
Flood	Rob	Gages Lake & North Shore Water Reclamation District
Fritz	Dean	Wildwood Park District
Giertich	Al	Lake County Department of Transportation
Grabowski	Cara	Natural Resource Conservation Service (NRCS)
Hedblom	Mary	Mundelein Resident
Heilemann	Rosemary	League of Woman Voters – Lake County
Heinz	John	CBBEL
Hickory	Arlene	Citizens Act to Protect Our Water
Hockman	John	Riverwoods Resident
Huaracha	Ernesto	Lake County Stormwater Management Commission
Johnson	Ken	Conservation Design Forum
Laramy	Jeff	Lake County Stormwater Management Commission
Meier	Robin	Loch Lomond Resident
Miceli	Tom	Sierra Club & Lake County Forest Preserve River Steward
Miceli	Kathy	Sierra Club & Lake County Forest Preserve River Steward
Morthorst	Tom	Village of Third Lake
Moss	Glen	Resident and Volunteer Steward
Nimmo	Al	Midwest Construction Products
Osterby	Sharon	Lake County Stormwater Management Commission

Last Name	First Name	Organization
Pfeil	Robert	Libertyville Resident
Polzin	Tom	Hey & Associates
Prusila	Mike	Lake County Stormwater Management Commission
Robinson	Joe	North Shore Water Reclamation District
Rodriguez	Gabriel	Vernon Hills Park District
Schultz	Sarah	Environmental Action Team
Smith	Brian	AECOM, Tollway
Sobol	Fred	Libertyville Resident
Sweeny	Ross	Niles Resident
Thomsen	Stephanie	Strand Associates, Inc.
Warner	Mike	Lake County Stormwater Management Commission
Warren	Ashley	Lake County Stormwater Management Commission
Weiss	Jeff	Buffalo Creek Clean Water Partnership
Werner	Patty	Lake County Stormwater Management Commission
Wilson	Donald	Resident and Volunteer Steward

**DES PLAINES RIVER WATERSHED MEETING REPORT**  
**CENTRAL PERMIT FACILITY**  
**500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**APRIL 13, 2017 \* 6:00 PM – 8:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to provide their input on developing an education and outreach strategy for the Des Plaines River watershed plan that will provide key stakeholders and the public with the knowledge, skills and motivation to implement the plan.

**1. *Introductions and Announcements***

- a. Introductions- Ashley Warren & Patty Werner led self-introductions. Patty introduced Jeff Boeckler of Northwater Consulting as the Des Plaines River Watershed Based Plan consultant. Northwater will be assisting SMC with the completion of the watershed plan.
- b. Review and accept March 9, 2017 meeting summary-The meeting summary was accepted by consensus.

**2. *“Tell it in Ten” Series: Prairie Crossing Charter School***

Geoff Deigan, Executive Director, Prairie Crossing Charter School (PCCS), gave a presentation on the background on PCCS, their educational awards, and school values. In 1999, Prairie Crossing Charter School was approved by the Illinois State Board of Education. Today, PCCS serves up to 432 students from grades Kindergarten through 8<sup>th</sup> grade, and the student demand is greater than the capacity the school allows. The school focus is on environmental learning, academic excellence, partnering with parents, and personal responsibility.

PCCS has received multiple awards for academic excellence, Leadership in Energy and Environmental Design (LEED) awards, green and blue ribbon school awards, National Charter School of the Year, etc... Parents and students choose PCCS for the small school personalized care they receive from teachers and staff, for the “learn by doing” education that inspires their students’ performance, and for the focus of keeping the environment at the center of everything they do.

Q- Is there a waiting list for PCCS?

A- Yes, the maximum number of students accepted into the school is 432. In 2016, there were 66 children on the waiting list – there is more demand than supply.

Q- Is there an Illinois network of schools that focus on the environment?

A- No, but there is a green schools network out of Madison, Wisconsin. PCCS hopes that all schools in the area will be “green, healthy, sustainable” by 2040.

Q- What is your (Geoff’s) background with PCCS?

A- Geoff’s 2 daughters attended the school the 2<sup>nd</sup> year it was open. In 2004, Geoff volunteered as the manager for the creation of the Comstock, Carson and Gym buildings, allowing PCCS to expand into a full K-8 public school. He served on the School Board in 2007, and during his 4-year tenure as Chair, he led an engaged, passionate and focused team of Directors with strong results. In 2013, Geoff returned as Executive Director to elevate the school’s mission, vision and culture. Geoff’s two daughters (PCCS Alumni) currently attend University of Iowa and University of Madison. 85% of PCCS alumni go on to Honors Courses in high school – it is PCCS’s desire to have alumni that are well rounded, responsible people.

**3. *Education & Outreach (E&O) Strategy Topics***

- a. Ashley Warren, Water Resource Professional, & Haley Meents, Communications Specialist, SMC presented background information for developing an education and outreach strategy that will include



identification of education and outreach topics, the provider and vehicle(s) for education, the target audience(s) and some sample messages that may be used for outreach.

#### **4. Breakout Session: E&O Strategy – Target Audiences, Methods/Vehicles, & Potential Messages**

Attendees were divided into 3 groups for a breakout session to gather input for the E&O Strategy. SMC staff led an education and outreach planning exercise that involved the group to review draft E&O Strategy components provided by SMC, and brainstorm additional ideas for the education and outreach strategy. SMC will summarize the stakeholder input and present a draft E&O Strategy for implementing the watershed plan at a later date.

#### **5. Next Meeting & Remaining Questions**

- a. Next meeting: Green Infrastructure & Watershed Land Use, May 11, 2017 at Central Permitting Facility, 2nd Floor, 500 W. Winchester Road, Libertyville, IL 60048; 1:00pm - 3:00pm. For more information visit: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **MEETING ATTENDEES:**

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Buckardt	Nan	Lake County Forest Preserve District
Burger	Jeanette	Long Grove Resident
Charland	Gloria	Sierra Club
Davis	Eileen	Lake County Forest Preserve District
Deigan	Geoff	Prairie Crossing Charter School
Denny	Greg	Diamond Lake Preservation Alliance
Godshalk	James	Lincolnshire Resident
Gurak	Ron	Long Lake Improvement & Sanitation Association
Heilemann	Rosemary	League of Woman Voters – Lake County
Hickory	Arlene	Citizens Act to Protect Our Water
Huaracha	Ernesto	Lake County Stormwater Management Commission
Jensen	Lynora	Master Naturalist & Forest Preserve of Cook County volunteer
Johnson	Chris	Sierra Club
Laramy	Jeff	Lake County Stormwater Management Commission
Lundy	Marj	Lincolnshire Resident
Meents	Haley	Lake County Stormwater Management Commission
Miceli	Tom	Sierra Club & Lake County Forest Preserve River Steward
Miceli	Kathy	Sierra Club & Lake County Forest Preserve River Steward
Mitros	Mary	DuPage County
Moss	Glen	Resident and Volunteer Steward
Nelson	Anna	Valley Lake Wildwood Park District Committee Member
Raube	Dennis	Lindenhurst Resident
Warren	Ashley	Lake County Stormwater Management Commission
Werner	Patty	Lake County Stormwater Management Commission
Wilson	Donald	Resident and Volunteer Steward

**DES PLAINES RIVER WATERSHED MEETING REPORT**  
**CENTRAL PERMIT FACILITY**  
**500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**MAY 11, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the Des Plaines River watershed land use, impervious cover and regional scale green infrastructure (GI) inventory. Our objective is to review and finalize criteria that will be used to prioritize open parcels for inclusion in a Des Plaines watershed green infrastructure network.

**1. *Introductions and Announcements***

- a. Introductions- Patty Werner, Planning Supervisor, Lake County Stormwater Management Commission (SMC) led self-introductions. Patty explained we have completed Year 1 of this 319 grant cycle and we are moving into Year 2 of the grant cycle, which will involve completing the watershed based plan with the assistance of Northwater Consulting. Northwater Consulting will be compiling the pollutant load modeling and watershed action recommendations for the planning area. The draft watershed based plan is due to be completed January 2018.
- b. Review and accept April 13, 2017 meeting summary - The meeting summary was accepted by consensus.

**2. *What is Green Infrastructure?***

- a. Patty Werner gave a brief presentation on what green infrastructure is, the different types of green infrastructure and green infrastructure's role in watershed planning. The two types of green infrastructure are site/local scale green infrastructure that include smaller scale in best management practices and the regional scale green infrastructure which looks at the network of green infrastructure areas/corridors (hubs). Green infrastructure is identified as a priority topic by watershed stakeholders and is an important component of "quality of life" in the watershed having significant influence on water quality, flooding, natural resources and our economy.

**3. *"Tell it in Ten" Series: Lake Co. Green Infrastructure Model & Strategy (GIMS)***

- a. Jim Anderson, Director of Natural Resources, Lake County Forest Preserve District (LCFPD), gave a presentation on LCFPD's (Lake County & surrounding areas) Green Infrastructure Model and Strategy (GIMS) results. GIMS supports consistent planning and implementation efforts toward a common vision for Lake County by being available for use for watershed based plans, comprehensive plans (etc....). GIMS was reviewed by a local advisory group.

Jim reviewed the benefits of GIMS and its importance to people (quality of life, space to grow food, health benefits) and the environment (enhancing ecosystems and creating more biodiversity). GIMS provides a framework for identifying conservation opportunities for the county's major landscape types – woodlands, wetlands, etc. and for considering strategic habitat conservation areas, enhancement areas and ecological complexes. As part of the modeling, GIMS estimated annual benefit values for green infrastructure for carbon storage, groundwater recharge and water purification ecosystem services.

Q - Can the public get to the GIMS data (or maps)?

- A- No, but a lot of the GIMS data is in Lake County's GIS map system (open to the public). SMC is using some the GIMS data for the watershed planning analysis. The GIMS data really requires a higher-level skill set with the specific software to interpret the data, but if there is a request made to LCFPD to share the data they are happy to do so.

Q- Is LCFPD willing to share the ecosystem services slides in your presentation?

A- Yes, we can make that available to the public – SMC will post the presentation on the Des Plaines Watershed Webpage on their website. Link to the website (see presentation slides).

Q- Has the LCFPD aggregated the numbers (for the ecosystem services annual benefit values) for just the Des Plaines River watershed?

A- No, not yet, but it would be interesting to see – SMC will use the data from LCFPD to aggregate the data.

#### **4. Watershed Land Use, Impervious Cover, & Regional Scale GI Inventory**

- a. Ernesto Huaracha, Water Resource Professional, SMC gave a presentation on Des Plaines River watershed current and future land use and its effects on impervious cover.
  - o Most of the Des Plaines River watershed land use is residential, followed by agriculture and open space (private/public). Looking at the predicted future land use changes, agriculture and open space areas appear to decrease the most compared to other land uses and residential and commercial/retail areas have the highest increase in land use area.
  - o The future land use data sources indicate that residential land use continues to be the largest land use within the planning area and that agriculture, forest, grasslands, open space and wetlands will be converted to further urbanized land uses.
  - o Impervious cover is an artificial surface that no longer allows water to enter the soil, which includes buildings, roads, parking lots, sidewalks and compacted open areas. The amount of impervious cover is important to watershed planning because impervious cover results in an increase in stormwater runoff, increased nonpoint source pollution in stormwater flows and impacts to local water quality and aquatic life.
  - o SMC is using a combination of planimetric (building, road and parking lot outlines) and the national land cover database (NLCD) datasets for analyzing impervious cover. Utilizing both datasets creates a more realistic understanding of urban development impacts and aids in development of local and regional green infrastructure planning.
  - o Based on those datasets, SMC has been able to determine impervious cover percentages (low-high) for each of the Des Plaines River watershed subwatersheds. Due to some subwatersheds being more highly developed such as Aptakisic and Buffalo Creek watersheds, they have a higher combined impervious cover (30-100%). Newport Drainage Ditch and North Mill Creek/Dutch Gap Canal have the highest ratio of undeveloped to developed land, more than 70% of the subwatershed is undeveloped (further details provided in the presentation).
  - o For comparative purposes, impervious cover analysis from 2001-2011 indicated 450 acres per year in the watershed were converted from pervious land to impervious cover due to various land use changes.

Q- Does SMC look at permeability of certain soils (ex: sand/gravel vs. clay has low permeability) when assessing the runoff characteristics of the watershed? Also, looking at climate change; soils are presumed to be drier and during rain events, these soils may not infiltrate the water quickly and may lead to increased stormwater runoff.

A- Soil characteristics will come into consideration when assessing green stormwater infrastructure projects, selecting areas for projects keeping soil types in mind. Example: Central Permitting Facility front rain garden and back rain garden got compacted during construction and ponded for the first few years (continuously, except during drier periods of the year). Even though those are higher clay soils, the native vegetation planted in those areas have helped decrease the ponding and increase permeability through the deep root establishment/growth. So, there is a difference even with a clay soil with native vegetation and deep root structure, which is far more permeable than a concrete or asphalt parking lot. So, the

differences between soil types are important, but there is a notable difference between different soil types and impervious surfaces.

Climate Change: SMC uses state rainfall models. What we see is the differences in the number and intensity of rain events. Although the rain events can be short in duration, they may generate higher amounts of rainfall runoff, resulting in flooding of stormwater management systems that aren't designed to accommodate those amounts of precipitation. Climate change is a significant unknown variable. How it influences the work we do is through the rainfall duration curves adopted by the agencies that look at climate. These are incorporated into any models that are done in relation to stormwater runoff.

Q- Lake County farm and tiles and their influence. How do you account for this?

A- These are in essence storm sewer systems in agriculture areas. Farmland is still pervious area because it is holding some water, and providing some recharge, but runoff is transported off-site through tiles and ditches. It may be comparable to a underdrain system in a constructed bioinfiltration system, which is – different from a natural forested area for example where trees are absorbing the precipitation or evapotranspiration occurs. So, the natural areas are the most beneficial for managing precipitation, followed by agriculture, then urbanized areas would be the least beneficial. Noted: when farmed areas are over-tilled (worked) there can be a hard pan created in the soil layer, where water does not infiltrate as well.

Q- How does SMC look at turf grass? Have seen studies that show turf grass infiltrates very little (almost like impervious cover).

A- The impervious cover dataset accounts for the turf grass areas. The NLCD dataset will pick up the turf grass through the 10-25% impervious cover dataset, in theory the water will infiltrate some but can still have stormwater that runs off pretty fast.

b. Jeff Laramy, GIS Analyst, SMC gave a presentation on how SMC develops the green infrastructure inventory using a parcel based analysis. SMC maps the open and partially open (publicly/privately owned) parcels in the watershed, identifies whether they are and protected or unprotected and open land, and then applies a list of prioritization criteria to rank green infrastructure. A binomial system is used. If a parcel receives one point for each criterion it meets. The parcels are then aggregated by functional benefit related to the watershed plan goals (water quality, flood mitigation, natural resources et.). There are a total of 116,334 parcels in the watershed planning area that will be evaluated based on 15 different prioritization criteria. Most of the process is semi-automated in GIS, however, we still need to go through and visually inspect and make corrections using aerial photography.

## **5. Review & Finalize Criteria for Prioritizing Parcels for GI Inventory**

- a. Mike Prusila, Water Resource Professional, SMC presented and explained the draft parcel prioritization criteria for the Green Infrastructure analysis. The criteria are used to prioritize open and partially-open parcels as described by J. Laramy in 4.b, above.
- b. The group agreed that the following criteria should remain unchanged in the analysis: Parcels that intersect the FEMA Special Flood Hazard Area (1% annual chance floodplain); Parcels within catchments with less than 1 square mile of drainage to a “channel” (as defined in the WDO); Parcels that intersect a wetland polygon as identified the Wetland Restoration and Preservation Plan; Parcels within a 0.5 mile radius of a flood problem area; Parcels within 100 feet of a watercourse or lake (lakes 6 acres or greater); Parcels intersecting the non-point source pollutant “hot spot” catchments, as determined by the pollutant loading analysis; Parcels adjoining to or including forest preserves, land trusts, township, and privately and publicly protected open space (incl. IL Natural Area Inventory sites and Nature Preserves); Parcels adjoining to or including high quality wetlands (ADID); Parcels adjoining to or including threatened and endangered species sites; parcels with prime agricultural soils; parcels with highly erodible soils; Parcels greater than

5 acres; Parcels within the GIMS Ecological Complexes; Parcels that connect existing protected open space areas.

- c. The group had questions or comments on the following: There was a suggestion to determine how the analysis is affected if adjacent hydric inclusions are added to the criteria to select parcels adjoining to or including at least 2.5 acres of drained hydric soil (i.e., non-wetland hydric soils). SMC will look into this, but in past analyses, hydric inclusions have covered large areas of watersheds and have not added great value to this kind of prioritization. There were suggestions to consider highly permeable soils (groundwater recharge value) and oak ecosystem soils. SMC has previously investigated how to include highly permeable soils in this type of analysis and there is not general agreement from experts in the field on a good data set to use. SMC will include the oak ecosystem soils in the criteria, if provided the data.

Q-Why aren't the criteria weighted?

A-For one, the stakeholder group is diverse, so desired weight of a particular criterion may differ among stakeholders. Secondly, if all criteria are weighted equally, it is clear that the analysis is evaluating all parcels objectively.

## 6. Next Meeting & Remaining Questions

- a. Next meeting: Watershed Funding Opportunities & Jurisdictional Coordination: June 8, 2017 at Central Permitting Facility, 2nd Floor, 500 W. Winchester Road, Libertyville, IL 60048; 1:00pm - 3:00pm. For more information visit: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

## MEETING ATTENDEES:

Last Name	First Name	Organization
Adler	Beth	Des Plaines River Watershed Workgroup
Anderson	Jim	Lake County Forest Preserve District
Baade	Tony	Loch Lomond Property Owners Association
Batz	Bill	Prairie Crossing Charter School
Charland	Gloria	Sierra Club
Chung	Fred	Village of Libertyville
Doyle	KC	Cook County Department of Environment & Sustainability
Dutton	Meghan	Sierra Club
Heilemann	Rosemary	League of Woman Voters – Lake County
Huaracha	Ernesto	Lake County Stormwater Management Commission
Laramy	Jeff	Lake County Stormwater Management Commission
Leach	Nick	Village of Gurnee
Miceli	Tom	Sierra Club & Lake County Forest Preserve River Steward
Miceli	Kathy	Sierra Club & Lake County Forest Preserve River Steward
Moss	Glen	Resident and Volunteer Steward
Papa	Jan	Bluegrass Ecological Services
Pfeil	Bob	Libertyville Resident
Prusila	Mike	Lake County Stormwater Management Commission
Raube	Dennis	Lindenhurst Resident
Rice-Davis	Chelsey	Congressman Schneider's Office
Rodriguez	Gabriel	Vernon Hills Parks
Schilling	Steven	Deigan & Associates
Smith	Brian	AECOM/Tollway
Soliz	Maggie	Applied Ecological Services
Sweeny	Ross	Citizen
Talbett	Michael	Village of Kildeer
Thomsen	Stephanie	Strand
Werner	Patty	Lake County Stormwater Management Commission
Wilson	Donald	Resident and Volunteer Steward

**DES PLAINES RIVER WATERSHED MEETING REPORT**  
**LAKE COUNTY DEPT. OF TRANSPORTATION**  
**600 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**JUNE 8, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the Des Plaines River watershed grant funding opportunities and how to leverage those funds for water quality, flood damage reduction, natural resource restoration projects, and environmental education programs.

**1. *Introductions and Announcements***

- a. Introductions - Ashley Warren, Water Resource Professional, Lake County Stormwater Management Commission (SMC) led self-introductions. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the May 11<sup>th</sup>, 2017 meeting summary without changes by consensus of the group.
- b. Mike Warner, Executive Director, SMC gave a brief congratulatory speech to announce that Patty Werner, Planning Supervisor, SMC will be retiring June 30, 2017. Congrats Patty!

**2. *“Tell it in Ten” Series: Lake County Forest Preserve Grant Streambank Stabilization Projects***

- a. Leslie Berns, Manager of Landscape Ecology, Lake County Forest Preserve District (LCFPD), gave a presentation on two of LCFPD’s grant funded stream and creek restoration projects. One of the projects was the Kildeer Creek Restoration project in the Heron Creek Forest Preserve; partially funded by Openlands, Illinois EPA and SMC. This project included the restoration of 3,700 feet of channel by installing best management practices such as stone toe and cross vanes (including a step pool technique) and utilizing some on-site trees as stabilization measures. The second project highlighted was Elm Road Woods Tributary Restoration Project in the Captain Daniel Wright Woods Forest Preserve; partially funded by a Watershed Management Board (WMB) grant. This project included a natural channel restoration of 2,200 feet of channel by installing timber cross-vanes (and single timber vanes), erosion control blanket and native vegetation BMPs to stabilize the creek. This project was focused on stabilizing the creek and adjacent areas through natural measures to help blend into the landscape and minimize disturbance with heavy equipment.

Q – Is Kildeer Creek a flashy stream? Why was the stone toe method selected at this site? Was it due to the volume of stream flow through the site?

A- The use of stone toe is not solely determined based on the volume of stream flow, it is also effective when a steeper stream channel gradient increases the velocity of the flow in the channel. Heron Creek has a lot of erosive power due to its steep slope or gradient. The step pool method was also used in certain areas where the gradient was higher. The stone toe practice is installed around the outside curves (bends) of the creek because of the erosive force of the water in these bends. Water will churn and dig down below the stone along the outside curves, so the stone toe needs to be installed deep to reduce erosion (and sheer stress). There are some places that stone toe will work better than others, you need to vary the rock sizes used in the practice to help hold the rocks together.

Q - What do you think the lifespan of the logs used for vanes and cross vanes at Elm Woods will be?

A- The Elm Road Woods project was experimental by utilizing on-site materials. White oak was used. It was estimated that the top log layer of the cross vanes would be exposed to more air and will likely result in faster decomposition; it is estimated to have a lifespan of approximately 20 years. The second (bottom) layer of timber cross vanes is estimated to be slower to break down (being submerged longer in water) and is estimated to have a lifespan of 30-40 years. The hope is that the area will stabilize itself within the lifespan of the logs. .

Q- Was the Elm Road Woods project a natural system?

- A- LCFPD thinks that area may have been a very small ephemeral stream, based on the land form.

Discussion:

- Based on experience, getting equipment and materials into some of the sensitive restoration sites can be difficult and destructive. This was the case for the Elm Road Woods project, so local on-site resources (logs) were utilized. Factors to consider when designing restoration projects for the future include climate change which could result in heavier and larger storm events than in the past, which will affect discharge rates (flows).
- What people should expect when planning projects like these.
  1. possible permitting – Army Corps of Engineers (ACOE), SMC Permits, Illinois EPA
  2. do the leg work for design and engineering and getting to know your project area.

### **3. *How to Get Your Watershed Project Funding Ready & SMC Grant Programs?***

- a. Patty Werner gave a brief presentation on getting your watershed project ready to fund by explaining the steps involved in getting your project ready to apply for funding. Some of the steps involved securing technical assistance, engaging participation with project partners, developing your concept design (30% of design should be completed), having a cost estimate for the project and writing a scope of work with a schedule/timeline. These steps are crucial to putting together a successful grant application. After these steps, finding potential funding sources and an administrative agent are important to start writing the grant application. Some recommendations before investing time in the grant writing process would be to make sure you are familiar with the grant program requirements, contacting the program contact/staff to be sure your project is a good match, and securing someone who is comfortable writing grant applications.

Q – What if a community or stakeholder has a new project idea for a 319 grant project and the watershed based plan is already completed? Do you have a process for amending the DPR Watershed based plan?

- A- Currently SMC is soliciting project ideas now to incorporate projects or action plan recommendations and updates into the watershed based plan. The Illinois EPA stated that local groups (planning committees) can use websites to make changes or updates to the watershed based plan. A watershed planning committee can acknowledge new techniques (or projects) and use the plan as a living document to make amendments. Please note: a potential 319 project has a much higher priority if it is referenced in an approved watershed based plan for the grant application, therefore any projects not in a watershed based plan during the interim 10-year period (every ten years the watershed based plans need to be updated) should get assigned an action ID number (site specific action recommendation) and inserted into the watershed based plan.
- b. Patty gave a presentation on SMC funding programs available. The available grants include watershed management board grants (WMB) and watershed management assistance grants (WMAG), stormwater infrastructure repair fund (SIRF), coordinating watershed projects and “regrants” funding from state and federal grants (including Illinois EPA 319 grants). In some instances, SMC takes the project lead and develops project funding for IEMA/FEMA hazard mitigation (structure buyouts) and in partnership w/locals on drainage system restoration projects. These grant opportunities vary in amount, cost share requirements, project purpose and SMC’s roles in the programs. Please contact SMC staff for more information.

### **4. *Funding Organization Panelists***

- a. Christine Davis, Illinois Environmental Protection Agency (Illinois EPA)
- Chris gave a presentation on Illinois EPA’s Nonpoint Source (NPS) Pollution Program (Clean Water Act Section 319). The NPS Pollution Program created a watershed priorities map to help determine high priority watershed projects (for both planning and implementation) that rotates watershed priorities each fiscal year within a 5-year cycle.

The grant projects typically range from \$100,000 - \$1.2 Million for projects that implement watershed-based plans and TMDLs. There is a minimum of 40% local cost share for 319 grants. Chris went through the grant application process for a 319 grant and the documentation that would be required and processes to expect. Chris introduced the Grant Accountability and Transparency Act (GATA), which is a new addition to the grant application process that is required for state grant assistance and creates a uniform budget template.

- b. Joseph Kratzer, Metropolitan Water Reclamation District of Greater Chicago (MWRD)
  - o Joe gave a presentation on MWRD's stormwater management program. This program is primarily focused on flooding issues in Cook County and has several programs (services include funding and/or technical assistance) that range from designing projects, to constructing projects and creating partnerships with local communities. MWRD's primary stormwater management activities include a capital improvement program to address regional stormwater problems and implementing comprehensive uniform stormwater regulations to ensure that future development and redevelopment does not exacerbate flooding. Some of the programs offered include Stormwater Phase I (DWP) & II Projects, Green Infrastructure (i.e. free rain barrel program) and Flood-Prone Property Acquisitions (voluntary buyouts). Some projects MWRD has been a part of include regional streambank stabilization projects, flood control projects, localized detention, upsizing critical storm sewers/culverts, pump stations, establishing drainage ways, etc.
- c. Nancy Williamson, Illinois Department of Natural Resources (IDNR)
  - o Nancy Williamson gave a brief overview of the GATA program and the step-by-step process to fill out the new forms and appropriate information to include. Nancy also provided an update for currently suspended IDNR grant programs. Some of the federally funded grant programs are available including Land and Water Conservation Fund (LWCF), Recreational Trails Program (RTP). It is uncertain how GATA requirements will affect small grant programs such as habitat/pheasant and schoolyard habitat grants.

*For additional information on each grant program please review the meeting PowerPoint presentations that can be found here: <http://www.lakecountyil.gov/3655/DPR-Watershed-Meeting-Summaries>.*

#### **Panelist Q&A:**

**Q** – How do you incorporate monitoring efforts into a 319 grant? The 319 grant is a 2-year cycle but monitoring efforts can take more than 2 years.

**A-** Illinois EPA does have grant recipients that are performing monitoring in a phased approach. They submit grant applications with components of the Phase I that they will complete and on the next cycle for the 319 grants will move onto Phase II. The Illinois EPA is considering accepting project proposals for a design, engineering and permitting (Phase I) of a project that will result in a Phase 2 proposal for project implementation in the next year/cycle. The design only grants would be considered a lower priority.

**Q-** Can an applicant get reimbursed for design work?

**A-** Reimbursement for design work can only happen during the approved grant time period (not for design work completed before the grant is awarded). If you have a design with a shovel ready project it tends to give the applicant a higher chance of getting awarded a 319 grant compared to a similar project without a design ready. In some cases, a WMB/WMAG grant can help with the costs of design work for a project.

**Comment/Discussion:** clarification on the comprehensive watershed based plan SMC is completing. Concerns about Long Lake and getting project implementation and watershed based plan funding for Squaw Creek watershed, which includes Long Lake within the Upper Fox River Watershed.

**A-** Lake County SMC is currently working on an umbrella watershed based plan for the Des Plaines River Watershed. Currently, not every watershed or subwatershed in Lake County



has an approved or up-to-date watershed based plan, but SMC has a goal in the future to have a watershed based plan for all the watersheds in the County. The Illinois EPA's TMDL report writing contractor is compiling an Upper Fox River Watershed Total Maximum Daily Load (TMDL) Report (completion date unknown), which may be eligible as a watershed based plan (The Illinois EPA is not sure it will contain the watershed based plan components). This would make the Upper Fox River watershed a higher priority for project funding if the TMDL is approved as a watershed based plan. Watershed stakeholders can directly apply to the Illinois EPA for completing a watershed based plan for their watershed or stakeholders can work with SMC to apply for a watershed based plan or project implementation. The advantage of utilizing SMC is they can help navigate project applicants through the grant documentation process and grant administration. By applying for a 319 grant through SMC, the cost share local match requirement becomes 50/50 because SMC uses the additional 10% as match for their administrative assistance.

Q- When will Squaw Creek be a high priority for 319 funding?

A- (Unknown at the meeting) The Upper Fox River (Squaw Creek) will be a priority watershed for IL EPA planning in 2019.

Q- Are there any MWRD funding or projects focused on water quality? Are any of the updates to the Cook County watershed plans considering water quality?

A- Although MWRD projects are mainly focused on flood control, to a certain degree MWRD tends to implement green infrastructure in their projects (which can improve water quality). Yes, 4 out of 6 of the MWRD detailed watershed plans are being updated to watershed based plans with the 9 US EPA required elements.

## 5. Next Meeting & Remaining Questions

- a. Next meeting: Transportation: July 13, 2017 at Lake County Department of Transportation, Conference Room A, 600 W. Winchester Road, Libertyville, IL 60048; 1:00pm - 3:00pm. For more information visit: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

## MEETING ATTENDEES:

Last Name	First Name	Organization
Adler	Beth	Des Plaines River Watershed Workgroup
Anderson	Ders	Openlands
Baade	Tony	Loch Lomond Property Owners Association
Burger	Jeanette	Buffalo Creek Resident
Beilfuss	Ed	Carillon North Homeowner Association
Berns	Leslie	Lake County Health Dept. (LCHD)
Bland	Jim	Sierra Club
Brady	Cathy	McDonald Creek
Burke	Caitlin	Gewalt Hamilton
Caldarella	Christie	HR Green
Clayton	Michael	Riverwoods Preservation Council
Charland	Gloria	Sierra Club
Comber	Donna	Carillon North Homeowner Association
Davis	Christine	Illinois Environmental Protection Agency (Illinois EPA)
Dorn	Brian	North Shore Water Reclamation District
Doyle	K.C.	Cook County Dept. of Environmental Control
Flood	Rob	Gages Lake; North Shore Water Reclamation District
Frable	Erika	Hawthorn Woods
Gurak	Ron	Long Lake Improvement & Sanitation Assn.
Heilemann	Rosemary	League of Women Voters
Hickory	Arlene	Citizens Act to Protect Our Water
Huaracha	Ernesto	Lake County Stormwater Management Commission
Johnson	Chris	Sierra Club

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Kessen	Jay	AMEC Foster Wheeler
Kowalski	Marian	Wildwood Park District
Kratzev	Joe	Metropolitan Water Reclamation District of Greater Chicago
Kuntz	Darrell	Lake County Div. of Transportation
Kuykendall	Scott	McHenry County
Leach	Nick	Village of Gurnee
Lofstrom	Michael	Vernon Township
Maldnad Zarda Pineda	Jackie	Round Lake Park Resident
Morthorst	Tom	Village of Third Lake
Neilson	April	Sierra Club/ ILM Environments
Olson	Darren	Christopher Burke Engineering, Ltd.
Pfeil	Robert	Libertyville Resident
Popelle	Joe	Long Lake Improvement & Sanitation Assn.
Prusila	Mike	Lake County Stormwater Management Commission
Raffel	Larry	Wheeling Park District
Reed	Bud	East Skokie Drainage Dist.
Ringa	RJ	Long Lake Improvement & Sanitation Assn.
Robinson	Joe	North Shore Water Reclamation District
Rodriguez	Gabriel	Vernon Hills Park District
Sauter	Holly	Metropolitan Water Reclamation District of Greater Chicago
Soliz	Maggie	Applied Ecological Services
Sweeney	Ross	Niles Resident
Takizana	Homnmi	Openlands
Vella	Steven	Libertyville Public Works
Weiss	Jeff	Buffalo Creek Clean Watershed Partnership
Williamson	Nancy	Illinois Department of Natural Resources (IDNR)
Wilson	Don	Lindenhurst Resident & Volunteer Steward
Zemaitis	Mike	Lake County Div. of Transportation



**JOINT MEETING OF THE  
DES PLAINES RIVER WATERSHED WORKGROUP (DRWW)  
AND DES PLAINES RIVER WATERSHED PLAN (DPR PLAN)  
AUGUST 17, 2017 1:30-4:00 PM  
LIBERTYVILLE VILLAGE HALL, SECOND FLOOR  
118 W COOK STREET, LIBERTYVILLE, IL 60048**

## **MEETING MINUTES**

- 1. Introductions and Announcements** – Brian Dorn, North Shore Water Reclamation District (NSWRD) and DRWW President, called the meeting to order at 1:30 pm, conducted introductions, and provided an overview of the meeting.
- 2. No previous meeting minutes to approve – May meeting was canoe outing**
- 3. Public Comment.** None.
- 4. Des Plaines River Watershed Planning Meeting** – Ashley Warren introduced the Des Plaines River watershed planning process and asked meeting attendees to review the June 8th, 2017 meeting summary.
  - a. Approval of 6/8/17 Meeting Summary by Consensus.** Meeting summary was approved by consensus.
  - b. DRWW and Historical Monitoring Data. (Note: All speakers powerpoint presentations are available at [DRWW.org/meetings/meeting presentations & http://www.lakecountyil.gov/3655/DPR-Watershed-Meeting-Summaries](http://www.lakecountyil.gov/3655/DPR-Watershed-Meeting-Summaries))**
    - i. Brian O'Neill – Burns and McDonnell.** Brian presented a powerpoint presentation regarding the importance of flow data, how to measure flow and results of data collected in the Des Plaines Watershed in 2016-2017.

Q - Will the data you are collecting be used in the plan?

A – Yes.

Q – With high rain events, that may continue to increase, how do you account for that?

A – That is a challenge for any of these types of relationships.

Comment: This flow monitoring is not intended to characterize flood relationships.

Q – If you have a narrow stream channel and then during flooding it is very wide, wouldn't you need 2 curves to determine flow?

A – Yes.

Q – If you could estimate what was the baseline discharge from the Des Plaines River, what would that number be?

A – I have not done that calculation.

Q – Do you do any measurements on groundwater?

A – No.

ii. **Mike Prusila – Lake County Stormwater Management Commission** gave a powerpoint presentation on historical water quality/sediment and fish/macro/habitat data for the Des Plaines River Watershed. No questions.

iii. **Chris Yoder – Midwest Biodiversity Institute (MBI)** gave a powerpoint presentation of DRWW water quality/sediment, fish/macro/habitat data collected in 2015-2016.

Q - What the quality of the water coming from Wisconsin into Lake County, IL?

A – The 3 most northern sampling locations in Lake County had a lack of fish/macros. The water up there is more like a wetland than a river, it is somewhat stagnant.

Q – There were some Polycyclic Aromatic Hydrocarbons (PAHs) detected over the limit in the Des Plaines River (mainstem), but good macroinvertebrate numbers, can you comment on that?

A – The macroinvertebrate numbers were good, but the fish diversity was not. The biology (fish and macros) is going to trump the pollutants, which means that if we can improve the fish diversity we will not have to worry about the pollutants.

Q – There are a lot of lakes in the watershed. Pollutant loads become a critical issue for evaluating lakes. More frequent collection of data would need to be done to evaluate lakes effectively. Any comment on this over the long haul?

A – I would generally agree with you, if that's what your goal is.

Mike Adam – The DRWW Lakes Committee will be looking at this and deciding if we can resolve this through modeling or if we need more data.

Chris Yoder – And that's a different goal or end point – a trophic state, which is based on water clarity, which is different than the one we are going for. The goal or end point we are going for is a high IBI number – which means there are healthy levels of fish and macroinvertebrates. If the IBI = 41 then the stream reach is considered to not be impaired.

Q – Comment on their being a bias in the metrics against headwater streams (tributaries) vs. Des Plaines River proper. Tributaries cannot have as many fish species as the river.

A – Illinois Indexes of Biological Integrity (IBI) is for wadeable streams, but it worked pretty good, so I'm not sure if this is a major issue. I agree with your concern, but I don't think it's quite that bad. We are more concerned that almost none of the 70 sites are meeting the IBI, which means it may be set too high or this regions' calibration is incorrect. MBI will have to do due diligence on that. We look at habitat sensitive species.

Q – One of the first slides says you are sampling based on potential aquatic uses, but most of your talk was about meeting state criteria, not aquatic use. It seems like all the push is to go back to a pre-settlement-type of condition.

A – No. The general use goal incorporates the aftermath of human development, finding the best of what's left, and calibrating the criteria to that. This is not a pristine goal. Lower DuPage at Shanahan Dam scores a 60 (highest score, but fish cannot re-establish above the dam. The species of fish you need to boost the IBI are not present above the dam. We may have to transport fish around the watershed.

Q – Why is the aquatic use above the dam the same as below the dam?

A – The dam is an impairment, and we need to fix that, but the problem is that not every impairment is not able to be fixed. We're not going to lower the bar due to socio-economic issues that cannot be resolved. The system starts from a reasonable statement of what a restored condition would look like and it's not asking for presettlement conditions. But there is a place to put them if we ever find them on this yardstick, which is important so you can go and protect those places.

Comment: Restorability helps us to determine what actions to take.

Q – One of the big negative impacts was chloride levels and siltation. You said reduction of road salt was a goal to get chloride levels down, what about silt? Does the silt come from (only?) farming?

A – Sediment from bank erosion mostly causes siltation in streams, so you can do bank erosion protection to reduce silt in streams. The U.S. Geological Society (USGS) did a tracer study which showed most of the silt came from stream banks and not farming. I was surprised to see the result of the USGS tracer study.

## **5. DRWW Business**

### **a. Committee Updates**

- i. Monitoring/WQ Improvement Committee.** Joe Robinson, chairman, gave the update. Joe stated that the presentations that had just been given by Brian O'Neill and Chris Yoder summarized all the work the committee has been doing. The committee will continue to discuss modifications to the monitoring program. Anyone who would like to be on the committee should come to the committee meetings – on the third Thursday of each month from 1:00 – 2:30 pm. Check DRWW.org for meeting dates, times, locations and agendas.
- ii. Lakes Committee.** Mike Adam, chairman, gave the update. The committee is working on analyzing/summarizing lakes data and how to incorporate it into the river data. The committee meets quarterly and anyone who wants to join is welcome. Check DRWW.org for meeting dates, times, locations and agendas.

**6. Next meeting for DRWW General Members: November 16, 2017. Location: TBT**

- a. Next Des Plaines River Watershed Planning Meeting (Topic: Transportation Planning & Winter Maintenance) will be September 14, 2017, 1:00pm -3:00pm at the Central Permitting Facility, 2<sup>nd</sup> Floor, 500 W. Winchester Road, Libertyville, IL 60098

**7. Old business:** None

**8. New business:** None

- 9. Adjournment:** Joe Robinson made a motion to adjourn. Michael Talbett seconded the motion. The motion passed unanimously.

**DRWW Members and Delegates Present:**

Al Giertych, Lake County DOT  
Alana Bartolai, Lake County Health Department  
Ashley Warren, Lake County SMC  
Betty Harrison, Village of Lake Zurich  
Brandon Janes, Village of Deerfield  
Brian Dorn, North Shore Water Reclamation District  
Donald Hey, Wetlands Research, Inc.  
Jim Anderson, Lake County Forest Preserve District  
Jim Bland, Sierra Club  
Joe Robinson, North Shore Water Reclamation District  
Kathleen Paap, Wetlands Research, Inc.  
Michael Talbett, Village of Kildeer  
Mike Warner, Lake County Stormwater Management Commission  
Paul Kendzior, Village of Libertyville  
Steve Vella, Village of Libertyville  
Tom Morthorst, Village of Third Lake  
Mike Adam, LCHD  
Ernesto Huaracha, LCSMC  
Mike Prusila, LCSMC (speaker)  
Nan Buckardt, LCFPD  
John Nelson, LCFPD  
Eileen Davis, LCFPD  
Monica Rockstroh, Christopher B Burke Engineering  
Graael Urbanos, LCHD  
David Brown, Vernon Hills  
Geoff Szafranski, Vernon Hills  
Gaby Rodriguez, Vernon Hills  
Cameron Crombie, LCHD  
Rob Flood, North Shore Water Reclamation District

**Additional Attendees:**

Beth Adler, DRWW Technical Coordinator  
Clint Bailey, USGS  
Brian O'Neill, Burns and McDonnell (speaker)  
Chris Yoder, MBI (speaker)

Patty Werner, citizen  
Aaron Goldberg, NEIU.edu  
Jeff Boeckler, Northwater Consulting  
Todd Peck, Zion Park Dist  
Adam Boeche, Mundelein  
Rosemary Heilemann, League of Women Voters  
Ross Sweeney, citizen  
Holly Hudson, CMAP  
Don Wilson, citizen  
Arlene Hickory, CAPOW  
Todd Gedvile, Vernon Twp  
Frank Abderholden, Trib Publications  
Ann Maine, Lake County Board  
Vince Mosca, Hey and Assoc.  
Scott Kuykendall, McHenry County  
Thomas Chefalo, LCPB&D  
Maria Gaytan-Martinez, House of Representatives  
Fred Schneider, citizen  
Bob Pfeil, citizen  
Cindy Bundaco, Wildwood Park District  
Jan Papn, Blue Stem Eco

**DES PLAINES RIVER WATERSHED MEETING REPORT**  
**CENTRAL PERMITTING FACILITY**  
**500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048**  
**SEPTEMBER 14, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about transportation pollution prevention practices, opportunities for best management practices (BMPs), reducing chloride use in the watershed through winter maintenance alternatives/practices and utilizing green infrastructure in the planning process of designing roadways, trails and parking lots.

**1. *Introductions and Announcements***

Introductions - Ashley Warren, Water Resource Professional, Lake County Stormwater Management Commission (SMC) led self-introductions. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the August 17<sup>th</sup>, 2017 meeting summary without changes by consensus of the group.

**2. *“Tell it in Ten” Series: Lake County Department of Transportation (LCDOT)***

- a. Al Giertych, Assistant County Engineer, LCDOT gave a brief overview of LCDOT’s operations and roles and responsibilities for Lake County. Al reviewed LCDOT’s strategic goals for improving the county’s transportation services; including providing public safety, enhancing economic opportunities, promoting a sustainable environment and building healthy and resilient communities. LCDOT’s management philosophy sets system priorities such as preservation, modernization and expansion, while exercising flexibility and creativity to shape effective transportation solutions LCDOT uses many tools (traffic management center) and outreach methods to keep Lake County residents updated on roadways and evaluating alternatives for roadway projects. Innovative stormwater practices are being utilized in some of the transportation projects. Highway maintenance operations follow an annual snow and ice control operations plan that define the level of service provided and consists of 26 assigned routes. LCDOT has found winter maintenance alternatives to reduce road salt application rates and minimize environmental impacts without sacrificing any safety components.

**3. *Transportation’s Role in the Des Plaines River Watershed***

- a. Ashley Warren gave a brief presentation on the transportation systems and winter maintenance alternatives in the Des Plaines River watershed planning area. The purpose of this meeting is to bring stakeholders in the Des Plaines River watershed together to learn about transportation pollution prevention practices, opportunities for best management practices (BMPs), reducing chloride use in the watershed through winter maintenance alternatives/practices and utilizing green infrastructure in the planning process of designing roadways, trails and parking lots. The Des Plaines River watershed planning area contains 1,886 centerline miles of roadway and although road improvement and construction projects are vital to economic stability and growth, it can result in negative impacts to the surrounding environment if not constructed using Best Management Practices. Of all the highway and parking lot runoff constituents (see presentation), Phosphorous, polychlorinated biphenyls (PCBs), Chlorides and Manganese are all listed on the Des Plaines River watershed impairments list.

**4. *Transportation Organization Panelists & Discussion (Al Giertych- Moderator)***

- a. Michael K. Skibbe, Deputy Director of Public Works, Village of Buffalo Grove
  - o Mike gave a presentation on the Village of Buffalo Grove’s Snow and Ice Control Program that was updated in 2014-2015. This update focused on re-evaluating the equipment and manpower used, routes taken, where reduced costs could come from. Through an increase in winter maintenance alternatives like liquids, the Village could decrease their salt use with a slight increase in the use of liquids with road salt. Anti-icing, prewetting, use of more liquids, carbide cutting edges, weather forecasting and wing plows have allowed the Village to cut down on some of their costs and maintain their efficiency on keeping roadways safe. The Village is the recipient of Excellence in Storage Award (Safe & Sustainable Snow fighting Award) since 1990 for properly storing road salt and the 2016 APWA Excellence in Snow & Ice Control Award.



- b. Darrell Kuntz, Project Manager, Planning Department; LCDOT
  - Darrell gave a presentation on the Illinois Route 83 to West of Alleghany Road, Peterson roadway improvement project and the stormwater BMPs implemented as part of this overall project. The project BMPs included detention basin (3 ponds) adjacent to the roadway, infiltration ditches (10,400 feet) adjacent to the trail path and roadways and median rain gardens (5) to filter stormwater runoff from the roadways and trail paths, and the use of compost material (13,000 cu.yds.) for native vegetation growth.
- c. Kermit Shockley, Yard Operations Supervisor; & Agar Shirani P.E., Hydraulics and Hydrology Studies Manager; Illinois Dept. of Transportation (IDOT)
  - Kermit gave a presentation on IDOT's winter maintenance operations. The IDOT facility trucks are equipped with extra winter maintenance alternative components that allow the road salt to be pre-wetted in the tanks of the vehicles during winter maintenance operations. The Bureau of Maintenance keep snow and ice cheat sheets in the vehicles to assist the drivers. Although it is difficult to know how much road salt reduction has occurred because each year the frequency and severity of the snow storms are different, the estimated cost savings from the Winter 2015/2016 is estimated to be \$483,360.
  - Agar gave a presentation on IDOT's BMP practices and the associated permits for IDOT projects. Agar explained the form for water quality BMPs permanent measures checklist that needs to be filled out for projects, which includes coordination with other agencies such as Army Corps of Engineers (ACOE), considerations for establishing new BMP measures and grey infrastructure BMP alternatives and sufficient right-of-way and easement access for the project. Some examples of projects incorporating BMPs included: detention basins for the IL 173 and US 41 roadway project and Washington Road from Illinois 21 to Illinois 137 project, a permanent sediment trap and settling basin at Hunt Club Road off Illinois 120 and a permanent sediment trap/ditch checks that drain to Loon Lake off Illinois Route 83 in Antioch.
- d. Bryan Wagner, Environmental Policy and Program Manager, Illinois Tollway
  - Bryan gave a presentation about summer and winter transportation BMPs. The Tollway has implemented an 11-mile bioswale pilot project along Route 294 and 94 in conjunction with the Cook County Forest Preserve District (FPDCC). This project consists of 7 wet/dry bioswale locations and adds up to a large percentage of total suspended solids, chloride and metals reduction. Along with bioswales other transportation (summer) BMPs implemented by the Tollway include: naturalized and in-pipe detention, and furrows, which are maintained through practices such as mowing and tree replacement policies, a tree planting initiative and a pollinator program. Some of the winter maintenance activities include deicing practices of mechanical plowing of 292 miles of roadway, 2 brine makers in the system and pre-wetting with brine or Beet Heet to a salt and sand mixture.
- e. Jack Linehan, Assistant to the Village Administrator, Village of Gurnee
  - Jack gave a presentation on the Village of Gurnee's sidewalk infrastructure and walkability that was integrated into the Village's 2016-2021 Strategic Plan through a Blue-Ribbon Commission (BRC) made up of the community members and Village planners. For this update, the BRC reviewed the 1996 Pedestrian Master Plan, the 2016 Pedestrian Survey, existing regional plans and GIS mapping to identify criteria for recommending new or improved infrastructure. The Blue-Ribbon Commission identified 30 projects that will improve accessibility and connectivity for pedestrian and bicyclists. These projects were then ranked into priority tiers (ranging from priority 1 to 3) based on the guiding principles of Connections to regional trails, parks and schools, improving connectivity along major roadways and local businesses and filling in infrastructure gaps.

#### **Panelist Q&A:**

**Q** – Did LCDOT add on higher costs by incorporating BMPs into your Peterson Road project? There was an option to just pipe the project?

**A-** The compost material was the highest costs of all the BMPs, but in general the BMPs in the project were minor costs in comparison to the overall costs for the roadway project. In the future, LCDOT will probably reduce the amount (thickness) of compost used on the site based

on this experience. This project had some room to work with, so adding in BMPs to the project was a good option. The project was going to incorporate ditches originally so infiltration ditches and median rain gardens were a better way to reduce runoff (since transportation projects are usually limited in ways to reduce runoff).

Storm pipes are seen as the last option at times because the pipes are another asset that an engineer will need to inspect and maintain. Open ditches are the preferred stormwater runoff collection and as a positive are not confined to a pipe size for transporting water flows.

Q- Are the rain gardens designed to be maintenance-free?

A- No, but they are designed to be low maintenance. The Village of Grayslake have been performing the maintenance on the median rain gardens.

Q- Did LCDOT select plants for the BMPs based on resistant to salt spray?

A- Yes, LCDOT used Morton Arboretum plant base to determine which plants will grow best in the roadway conditions (including salt spray) and selecting plants that do not drop a lot of fruit (clogging up the storm sewers).

Q- Did LCDOT have to get a permit from the Illinois EPA to use compost in an aquatic environment?

A- No, an Illinois EPA permit was not acquired for this project. An ILR10 permit and NPDES permit for this project.

Q- Did LCDOT have any plans to monitor salt retention on this project?

A- Not at this roadway site, but LCDOT and the LCHD are performing monitoring in Bull Creek (downstream of the road salt storage facility) and creating a chloride capture facility through engineered soils.

The best way to reduce output or discharge of chlorides is to reduce its use. You can attenuate them when you use BMPs (release rate) but the intent of the BMPs is to reduce the other stormwater constituents related to highways and parking lots.

Q- Was the 30-40% chloride reduction shown in the Tollway's presentation representing the reduction in chloride use or a filtered reduction in chloride from implemented BMPs?

A- That 30%-40% chloride loss was from the BMPs implemented by the Tollway. The retention BMPs allowed some stormwater runoff to infiltrate into the engineered soils, resulting in a chloride loss.

Q- Have you incorporated new BMPs at local salt storage maintenance facilities? Higher chloride levels are coming from those facilities. Is there any monitoring for these facilities?

A- The IDOT facilities are left with extra salt at the end of the winter season so IDOT has started to build additional salt storage facilities (2 buildings finished and a third is in progress) away from storm sewer drains and this allows IDOT to maximize the amount of road salt in those sheds. IDOT does perform EMIS monitoring monthly to see if salt is leaching out.

The Tollway does keep road salt storage under a roof and good housekeeping practices are implemented at the facilities. There is visible monitoring for road salt leaving the facility but no additional data for pollutant monitoring is currently being collected.

Q- What are the major components of a liquid brine? Does it contain any alcohol? How did beet juice get involved in winter maintenance? What is Beet Heet?

A- LCDOT mainly uses salt brine, calcium chloride and Beet Heet. LCDOT liquid mixes contain 70-80% salt brine with calcium chloride or Beet Heet. Road salt alone does not work as well at lower temperatures. The Beet Heet is a beet juice derivative. The liquids do not contain any alcohol and are made at the Libertyville LCDOT facility. LCDOT looked to McHenry County's

winter maintenance operations when they started using a Supermix which used beet juice and LCDOT started using beet juice as of last year and will continue to use it.

The Village of Buffalo Grove also uses beet juice in their operations and the beet juice has proteins and the sugars in the beets that helps with some of the anti-icing and anti-corrosive properties. Beet Heet is a commercial version of beet juice.

Q- Does each Village need to have a slurry truck? Is there a way for all of these Villages to collaborate on this effort for winter maintenance? Would a Village be lacking if they did not have the ability to mix the liquid themselves?

A- The Deicing Workshops and the APWA are good examples of ways that Villages and other transportation agencies can come together to collaborate and network for winter maintenance. Word of mouth through Villages, Townships and through conferences allow agencies like LCDOT to educate and assist others with winter maintenance alternatives. A Village may be at a disadvantage by not making their own mix, but some communities are purchasing the appropriate equipment together or buy the blends pre-mixed. In a small Village, it is good to network with other smaller small Villages and coordinate with one another for winter maintenance.

Q- Has there been consideration of creating buffer areas or zones around lakes for reduced chloride application?

A- The goal is to reduce chloride application generally. Specifically, LCDOT is attempting to reduce the number of outfalls directly to lakes.

Q- Is there a way to interface to private contractors (shopping centers, church parking lots, etc.)?

A- The Deicing Workshop is a great way that Lake County is reaching out to that group of people.

Q- Why was chloride chosen as opposed to sodium?

A- Chloride is very mobile, plentiful, cheap and effective.

##### **5. Next Meeting & Remaining Questions**

- a. Next meeting: Cohosting with the Bull Creek – Bulls Brook Watershed Council; Non-Point Source Pollution: October 12, 2017 at the Central Permitting Facility, 500 W. Winchester Road (2nd Floor), Libertyville, IL 60048; 1:00pm - 3:00pm. For more information visit: <http://www.lakecountylil.gov/2387/Des-Plaines-River-Watershed-Plan>.

##### **MEETING ATTENDEES:**

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Adler	Beth	Des Plaines River Watershed Workgroup
Dittrich	Wally	Village of Lincolnshire
Wagner	Bryan	Tollway
Hey	Donald	Wetlands Research Inc.
Coggin	Ed	Weston Solutions
Maine	Ann	Lake County Board
Bland	Jim	Sierra Club
Bundalo	Cindy	Wildwood Valley Lake
Burke	Caitlin	Gewalt Hamilton
Skibbe	Mike	Village of Buffalo Grove
Clayton	Michael	Riverwoods Preservation Council
Shockley	Kermit	Illinois Dept. of Transportation
Linehan	Jack	Village of Gurnee
Burger	Jeanette	Resident
Warner	Mike	Lake County Stormwater Management Commission
Adam	Mike	Lake County Health Department
Flood	Rob	Gages Lake; North Shore Water Reclamation District
Frale	Erika	Hawthorn Woods

Last Name	First Name	Organization
Kerrigan	Kevin	Lake County Dept. of Transportation
Heilemann	Rosemary	League of Women Voters Lake County
Hickory	Arlene	Citizens Act to Protect Our Water
Huaracha	Ernesto	Lake County Stormwater Management Commission
Papp	Kathy	Wetland Research Inc.
Peterson	Maria	Resident
Panther	Reed	Tollway
Calabresa	Carol	Lake County Public Building and Development
Kuntz	Darrell	Lake County Div. of Transportation
Kuykendall	Scott	McHenry County
Werner	Patty	Resident
Homola	Sandy	Exp Global Inc.
Shirani	Agar	Illinois Dept. of Transportation
Morthorst	Tom	Village of Third Lake
Batista	Santos	Illinois Dept. of Transportation
Harrison	Betty	Village of Lake Zurich
Little	Barbara	Village of Deerfield
Gedville	Todd	Vernon Township
Prusila	Mike	Lake County Stormwater Management Commission
Benjamin	Grant	Long Lake Improvement & Sanitation Association (& Sierra Club)
Pribyl	Susan	Long Lake Improvement & Sanitation Association (& Sierra Club)
Weiss	Jeff	Buffalo Creek Clean Watershed Partnership
Warren	Ashley	Lake County Stormwater Management Commission
Zemaitis	Mike	Lake County Div. of Transportation

**JOINT MEETING FOR  
DES PLAINES RIVER WATERSHED PLANNING &  
BULL CREEK – BULLS BROOK MEETING MINUTES  
CENTRAL PERMIT FACILITY, 500 W. WINCHESTER ROAD, LIBERTYVILLE, IL 60048  
OCTOBER 12, 2017 \* 1:00 PM – 3:00PM**

---

**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the Des Plaines River watershed non-point source pollution (NPS) and present the NPS pollution modeling that has been compiled by Northwater Consulting.

**1. *Introductions and Announcements***

Introductions - Ashley Warren, Water Resource Professional, Lake County Stormwater Management Commission (SMC) led self-introductions. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the September 14<sup>th</sup>, 2017 meeting summary without changes by consensus of the group.

Kathleen O'Connor, Council Chairperson, Bull Creek – Bulls Brook (BC-BB) Watershed Council gave an update to the meeting attendees that the March 2018 Des Plaines River Watershed Planning Meeting will be replacing the March 2018 BC-BB Watershed Council meeting in order to be a part of the Des Plaines River watershed draft review of the watershed-based plan. Currently the watershed council is in a holding pattern to assess how they will move forward once the umbrella Des Plaines River Watershed-Based Plan is completed.

**2. *“Tell it in Ten” Series: Bull Creek - Bulls Brook Watershed Council***

- a. Kathleen O'Connor gave a brief overview of BC-BB watershed council operations that started following the completion of the 2008 BC-BB watershed-based plan. The watershed council focuses on watershed project updates, adult and youth education and projects, as well as producing a watershed E-news newsletter to keep their stakeholders involved in partnership and volunteer opportunities. The partnerships and volunteers that are part of this watershed council play a big role in the council's success.

Libertyville Township plays an active role in the watershed council by utilizing their open space areas to transition into restoration projects and wetland mitigation sites. Although the watershed council is in a holding pattern for future meetings and newsletters, the watershed stakeholders remain active. Libertyville Township is also partnering with Lake County Forest Preserve District (LCFPD), Conserve Lake County, Hey and Associates and SMC to implement an award Illinois Environmental Protection Agency (Illinois EPA) Section 319 wetland and gully restoration opportunity north of Casey Road in Libertyville Township.

**3. *Pollution Sources in the Des Plaines River Watershed***

- a. Mike Prusila, Planning Supervisor, SMC gave an overview presentation on pollution sources (point and nonpoint sources) in the Des Plaines River watershed planning area. The point sources (“end of pipe”) are permit regulated under the Clean Water Act and include effluent and runoff through engineered structures. Non-point source pollution is not permit-regulated under the Clean Water Act but are the leading cause of water quality problems. Point source discharges are easier to identify since they come from an engineered structure, i.e. wastewater treatment plant discharges, municipal separate storm sewer systems (MS4s), Industrial stormwater discharges, etc.... It becomes more difficult to regulate when dealing with nonpoint source pollution that originates from agriculture, transportation systems and urban area runoff, dams, channelization of streams, shoreline and streambank erosion and atmospheric deposition. Most pollutants of concern in the DPR watershed have point and nonpoint sources such as: total suspended solids/sediment, nutrients (nitrogen & phosphorus), chloride, bacteria and hydrocarbons. The ways we can identify or estimate the extent of the presence of sources in the watershed is by permit data, monitoring data, total maximum daily load (TMDL) and nonpoint source pollutant loading model.

**4. *Des Plaines River Watershed Non-Point Source Pollution Modeling Results***

- a. Jeff Boeckler, Principal and Founder, Northwater Consulting presented the preliminary watershed loading & nonpoint source (NPS) model for the Des Plaines River watershed. The watershed

loading summary encompasses all sources of pollution (based on the best available data), including the NPS pollution model, wastewater treatment plant (WWTP) data, stream and lake shoreline estimates and septic estimates. The inputs for the non-point source model include land use, existing BMP data, field observations from a 2017 windshield survey of the watershed and some additional delineation measures. Other considerations taken into account for the NPS model include precipitation values and soils hydrologic groupings. The NPS model is set up with a curve number equation for runoff and event mean concentrations for pollutants, then calibrated using the U.S. Geological Survey (USGS) gauge data, Des Plaines River Watershed Workgroup (DRWW) water quality data and adjusted model parameters to fit measured loads. Based on USGS gauge data and DRWW water quality data, the load duration analysis calculated annual average flow using the 22 sample events taken during the 2014 monitoring year. NPS pollution load allocations for all pollutants modeled were summarized by the top 3 land use categories, which included residential single-family, row crops, open water and roadways. Other sources of pollution included loading values 18 WWTP monitoring reports, lake bank erosions from 45 assessed lakes from average eroding bank height and annual recession rate, streambank erosion from SMC inventory data for estimated annual sediment and nutrient loads and failing septic systems from previous (sub)watershed-based plans and building locations.

Q – Was historical water quality data used from other subwatershed plans for this model?

A - Yes, the model also included Illinois EPA, WWTP and DRWW water quality data. The other subwatershed-based plans did not have the extent of data that the DRWW provided for this plan.

Q- How were the results modified? How much assumption was used and was there any sensitivity analysis?

A- No sensitivity analysis has been performed, assumptions include the use of event mean concentrations, the accuracy of the land use data, and professional judgment used to adjust the model at calibration points.

Q- Was rainfall incorporated into the model?

A- Yes, the model uses rainfall data

Q- What will be done with the NPS model information?

A- This information will be incorporated into watershed-based plan and help access potential best management practices (BMPs) that would be beneficial in certain areas. The model will also be incorporating BMPs to determine reductions models at each location.

Q- Will implemented BMPs be incorporated into the model?

Yes, SMC has been reaching out to local jurisdictions and stakeholders for updates to existing BMP information and potential new BMPs.

Q- How important are future land use models? Municipalities overestimate their expansions, impervious surfaces, parking lots, commercial growth.

A- The uncertainty of future land use reduces the real-life accuracy of the “future” condition model. However, it is still instructive to indicate areas where pollutant loads are likely to change if future land use changes occur.

Q- Is there a section in the plan or analysis for what is coming into the county?

A- (See presentation) You can view the data results at the monitoring gauge on the Des Plaines River at Russell Road, border of Lake County Illinois and Kenosha County Wisconsin to see what is coming into Lake County.

Q- Some of the WWTP's are currently upgrading to meet the new phosphorus regulations of 1mg/liter monthly average discharge, is there any thought to comparing these preliminary results to future results once the upgrades have been implemented?

A- That is an option, it could be very helpful to compare the preliminary results to future monitoring efforts.

Q- Is there confidence in this preliminary data?

A- Yes, there is good preliminary data but it would be better to have another 3-4 years of monotiling data to more confidence in the results.

Q- Has setting up a voluntary monitoring program been considered? Setting up a website and collecting data and uploading the results to have more sample sites.

A- This has been done with the Lakes Management Committee but one consideration is quality control over the sampling data.

#### **5. Bull Creek - Bulls Brook Informational Speaker**

a. Mike Warner, Executive Director, SMC gave a summary of the July 2017 Flood Event in Lake County through a Flood Problem Area and Mitigation Web Application. Mike presented the rainfall distribution map from the July 2017 event that indicated the rainfall totals throughout the region, noting that the rivers in different watersheds peaked on different days. The reported damage from this event is approximately 50% of all affected structures. A map of SMC project locations and SMC's comprehensive plan project recommendations to compare the spatial distribution and areas that need to be further addressed. Another map showed the correlation of buyout project points and reported remaining flooded homes. An example was given of Mill Creek watershed needs assessment, and Des Plaines River needs assessment planning in progress.

Q- What is the process of the buyout program?

A- The process includes working with a homeowner to assess and buy their home, which will then be taken down and the parcel is graded to allow as much flood storage capacity as possible and the local entity assumes responsibility of the property.

Q- Why is turf grass installed at some of these sites (not as absorbing as native vegetation)?

A- SMC prefers to install native vegetation but the owner must agree to this as well as the local residents and entities. SMC tries to work with the owner and local residents, as well as the local surroundings, to develop a restoration plan acceptable to everyone and sometimes turf grass is asked to be used. There are several examples of projects that have installed native vegetation and installed other BMPs on buyout properties. See <https://arcgis.com/arcgis.js>.

#### **6. Next Meeting & Remaining Questions**

a. Next meeting: Watershed Plan Implementation & Milestones: Cohosting by the Des Plaines River Watershed (DRWW) November 16, 2017 at Central Permitting Facility, 2nd Floor, 500 W. Winchester Road, Libertyville, IL 60048; 1:30pm - 3:30pm. For more information visit: <http://www.lakecountyil.gov/2387/Des-Plaines-River-Watershed-Plan>.

#### **MEETING ATTENDEES:**

Last Name	First Name	Organization
Adam	Mike	Lake County Health Department
Adler	Beth	Des Plaines River Watershed Workgroup
Anderson	Jim	Lake County Forest Preserve District
Benjamin	Grant	Long Lake Improvement & Sanitation Association (& Sierra Club)
Boeckler	Jeff	Northwater Consulting
Burger	Jeanette	Resident
Burke	Caitlin	Gewalt Hamilton
Charland	Gloria	Sierra Club
Chefalo	Tom	Lake County Public Building and Development
Cooper	Jeff	Village of Libertyville
Dorn	Brian	North Shore Water Reclamation District
Flood	Rob	Gages Lake; North Shore Water Reclamation District
Happ	Jonathan	Libertyville Township
Hickory	Arlene	Citizens Act to Protect Our Water
James	Kirsten	Hey and Associates Inc.
Jeske	Brian	Mundelein Park District
Johannesen	David	James Anderson Co.
Johnson	Chris	Sierra Club

<b>Last Name</b>	<b>First Name</b>	<b>Organization</b>
Klick	Ken	Lake County Forest Preserve District
Knysz	Marcy	Manhard Consulting
Melara	Alvaro	Congressman Brad Schneider
Miceli	Kathy	Sierra Club
Miceli	Tom	Sierra Club
Morthorst	Tom	Village of Third Lake
Mosca	Vince	Hey & Associates Inc.
O'Connor	Kathleen	Libertyville Township & BC-BB Watershed Council
Prusila	Mike	Lake County Stormwater Management Commission
Robinson	Joe	North Shore Water Reclamation District
Rodriguez	Gaby	Vernon Hills Park District
Sweeny	Ross	Citizen
Talbett	Michael	Village of Kildeer
Warner	Mike	Lake County Stormwater Management Commission
Warren	Ashley	Lake County Stormwater Management Commission
Wilson	Don	Citizen
Zemaitis	Mike	Lake County Div. of Transportation





***JOINT MEETING OF THE  
DES PLAINES RIVER WATERSHED WORKGROUP (DRWW) &  
DES PLAINES RIVER WATERSHED PLANNING MEETING***

**NOVEMBER 16, 2017 1:30-3:30 PM  
LAKE COUNTY CENTRAL PERMIT FACILITY, SECOND FLOOR  
500 W. WINCHESTER RD, LIBERTYVILLE, IL 60048**

**MEETING MINUTES**

- 1. Introductions and Announcements** – Al Giertych with Lake County Department of Transportation and DRWW Vice-President, called the meeting to order at 1:35 pm, conducted introductions, and provided an overview of the meeting.
- 2. Public Comment.** None
- 3. Des Plaines River Watershed Planning Meeting** – Ashley Warren, Water Resource Professional, Lake County Stormwater Management Commission (SMC) led self-introductions. A list of the meeting attendees is included with this meeting report.
  - a. Approval of 10/12/17 Meeting Summary by Consensus.** Meeting attendees reviewed and accepted the October 12th, 2017 meeting summary without changes by consensus of the group.
  - b. Prioritized Action Plan.** Ashley Warren discussed Chapter 6 of the Des Plaines River Watershed-Based Plan. This chapter presents a prioritized action plan which details potential options for mitigating pollutant issues and provides recommendations to meet the watershed plan goals. The action plan is written to provide stakeholders with guidance for identifying projects and to allow for the potential access to Section 319 and other sources of grant funding. The action plan consists of two action recommendations; programmatic and site-specific action plan recommendations. Programmatic actions are based on watershed-wide programs, policies, and regulatory actions such as phosphorus bans. Site-specific actions are on-the-ground, specific location actions, such as establishing native vegetation at a detention basin. The actions are selected to achieve goals which were selected based on stakeholder input and previous plans within the watershed. Supporting information is included for each action including priority (high, medium, or low), lead and supporting partners for implementing the action, stakeholder input and an estimated timeframe for completing the action (short, medium, long).

**Comments** were made jointly by League of Women Voters/Sierra Club: Requesting that SMC identify specific, preventive measures to reduce non-point source pollution, adopt regulations to promote Green Infrastructure, reduce runoff of nutrients, phase out lawn fertilizers with phosphorus, and educate about road salting.

Ashley Warren: SMC is continually updating the plan based on stakeholder input, SMC is still receiving input from organizations and updating the plan accordingly.

**Q/A**

**Q:** Will removal of invasive phragmites is included in the action plan?

**A:** Phragmites is an issue that will be addressed in the plan. This will be a programmatic action due to the prevalence and persistence of phragmites in Lake County.

- c. Watershed Plan Implementation.** Jeff Boeckler, Northwater Consulting discussed the Des Plaines River Watershed 2017 windshield survey and a draft of the site-specific action plan. The windshield survey identified projects within the watershed that could be implemented with minimal planning. The survey identified opportunities to install or improve bioswales, urban detention ponds, ponds, grade control structures, sediment dams, water and sediment control basins, grass waterways, wetlands, field borders, filter strips, rain gardens, rain barrels and porous pavement. Sites for recommended stream bank stabilization were identified using information collected during the SMC stream inventory. The detention basin inventory for the watershed is being reviewed, updated, and incorporated into the action plan. Watershed-wide practices such as road salt management were identified using GIS layers. Lake specific recommendations were identified by the Lake County Health Department and DRWW. The next steps are to finish evaluating the inventory data, apply unique ID's to each location, populate jurisdictional responsibilities, calculate expected annual load reductions for BMP's in drainage areas, and determine reasonable milestones and a schedule for implementation. Jeff then introduced the web interface map that displays that identifies existing and recommended practices in the watershed. All plan recommendations will be mapped in this interface, which will be available to the public.

**Q/A**

**Q:** The entire group was asked if they were comfortable using a web interface to identify projects in their area of interest and if this method was better action planer maps and tables?

**A:** It was stated that having all the information in a sortable format such as a table that could be related to the web interface would be ideal. There should be an option to print maps from the interface for people who do not use or are comfortable with computers.

**4. DRWW Business**

**a. Approval of Previous Meeting Minutes (8/17/17).** Paul Kendzior made a motion to approve the minutes, Joe Robinson seconded. Motion passed by unanimous voice vote.

**b. Committee Updates**

- i. Monitoring/WQ Improvement Committee.** Joe Robinson, Chairman gave a presentation of the summaries of the Draft Biological and Water Quality Assessment of the Upper Des Plaines River and Tributaries (2017) and the Draft Flow Monitoring Report (2017). Joe said next steps include (1) revising the monitoring program and (2) addressing water quality improvements by reducing siltation; continuing the de-icing education program; reducing PAHs through control and education; habitat improvement and POTW phosphorus load reduction.
- ii. Lakes Committee.** Mike Adam, chairman talked about the De-icing Workshop held every fall by LCHD and SMC (this year 200 people were trained). A de-icing test is administered at the end of the training, if the test is successfully completed then they are placed on a "preferred provider" list which is on SMC's website. Regarding the Lakes Committee update, Mike noted that there is a good data set for all the Lakes. Now it is time to start determining, using modeling, if the nutrient loadings are internal or external. After this determination, the Lakes Committee can come up with recommendations on how to address these sources of nutrients. Additional sampling may be necessary to verify the results of the modeling. In addition, Jim Bland is working on sampling for zebra mussels and their impacts.

**5. Old Business**

- a. Approval of Technical Coordinator Contract.** Mike Warner, Administrator went over the modifications to the technical coordinator contract since the last Executive Board meeting. There were no questions. Paul Kendzior made a motion to approve the Technical Coordinator Contract, Jim Anderson seconded. The voice vote was unanimous in favor of approving the contract.

**6. New Business:** None.

**7. Next DRWW General Membership Meeting:** February 15, 2018 at Lake County Central Permit Facility at 1:30 pm.

- a. Next Des Plaines River Planning Meeting:** December 7, 2017 1-3pm (with an optional off-site tour after), at the Buffalo Grove Village Hall, 50 Raupp Blvd., Buffalo Grove, IL 60089

**8. Adjournment:** Joe Robinson made a motion to adjourn. Michael Talbett seconded the motion. The motion passed unanimously.

**DRWW Members and Delegates Present:**

Al Giertych, Lake County DOT  
Beth Adler, DRWW Technical Coordinator  
Brandon Janes, Village of Deerfield  
Darrell Olsen, Christopher B Burke Engineering  
Donald Hey, Wetlands Research, Inc.

Jim Anderson, Lake County Forest Preserve District  
Joe Robinson, North Shore Water Reclamation District  
Michael Talbett, Village of Kildeer  
Mike Adam, Lake County Health Department  
Mike Warner, Lake County Stormwater Management Commission  
Paul Kendzior, Village of Libertyville  
Rob Flood, North Shore Water Reclamation District

**Additional Attendees:**

Adam Boeche, Mundelein  
Ashley Warren, SMC  
Chris Geiselhart, LPAHA  
Don Wilson, citizen  
Ed Coggin, Weston  
Ed Lebbos, BLA/VOL  
Ernesto Huaracha, SMC  
Fritz Chesek, citizen  
Jan Action plana, Bluestem Ecological Services  
Jeff Boeckler, Northwater Consulting  
Jeff Weiss, Buffalo Creek Subwatershed Workgroup  
John Hines, LLPOA  
Jonathan Happ, Libertyville Twp  
Kathy Micali, Sierra Club  
Kirsten James, Hey and Assoc.  
Maggie Soliz, AES  
Mike Prusila, SMC  
Moses Amidei, Wadsworth Village Administrator  
Patty Werner, citizen  
Rosemary Heilemann, League of Women Voters  
Ross Sweeney, citizen  
Todd Gedville, Vernon Twp  
Tom Chefalo, LCPBD  
Tom Miceli, Sierra Club  
Tony Baade, LLPOA  
Vernon Witthuhn, Strand Assoc.  
Willy Dittrich, Village of Lincolnshire

**JOINT MEETING FOR  
DES PLAINES RIVER WATERSHED PLANNING MEETING &  
BUFFALO CREEK CLEAN WATER PARTNERSHIP MEETING AGENDA  
VILLAGE OF BUFFALO GROVE COUNCIL CHAMBERS  
50 RAUPP BLVD. BUFFALO GROVE, IL 60089  
DECEMBER 07, 2017 \* 1:00 PM – 3:00PM**



**Meeting Purpose:** To bring stakeholders in the Des Plaines River watershed together to learn about the importance of wetlands and preview the Wetland Restoration and Preservation Plan findings. Stakeholders will also be provided an opportunity to provide feedback on the BCCWP milestone scorecard.

**1. *Introductions and Announcements***

Introductions - Ashley Warren, Water Resource Professional, Lake County Stormwater Management Commission (SMC) led self-introductions. A list of the meeting attendees is included with this meeting report. Meeting attendees reviewed and accepted the November 16<sup>th</sup>, 2017 Des Plaines River Watershed meeting summary without changes by consensus of the group.

**2. *"Tell it in Ten" Series: Buffalo Creek Clean Waters Partnership (BCCWP)***

Jeff Weiss gave a brief overview of BCCWP operations and the geography of the Buffalo Creek watershed. The partnership previously conducted water quality monitoring at 15 sites along Buffalo Creek. The Des Plaines River Watershed Workgroup has continued these monitoring efforts. The BCCWP wrote a watershed-based plan for Buffalo Creek which identified approximately 30 programmatic and 531 site-specific action recommendations within the watershed. The watershed plan has been adopted by multiple municipalities in the watershed; however, select municipalities have not yet adopted the plan. The next major efforts for the BCCWP includes encouraging municipalities and organizations to support the Des Plaines River Watershed-Based Plan, developing a demonstration project within the watershed, implementing the organizations education and outreach program and implementing site specific and programmatic actions identified in the Buffalo Creek Watershed-Based Plan.

**3. *Lake County Wetland Restoration and Preservation Plan & Watershed Wetland Restoration Opportunities***

Mike Prusila, Planning Supervisor at SMC gave an overview presentation on the Lake County Wetland Restoration and Preservation Plan (WRAPP) and wetland restoration opportunities in the Des Plaines River watershed. Previous watershed plans written by SMC have incorporated wetlands; however, there has not been a consistent methodology between plans. The WRAPP seeks to provide a uniform baseline across the county for incorporating wetlands into watershed-based plans and to provide a planning tool for a wide range of end users. The end products of the WRAPP will be a report, an online mapping tool, and data to inform watershed-based plans. To create this data, a technical advisory committee was consulted to determine 13 wetland functions to assess areas within the county. To develop the GIS database, the Lake County Wetlands Inventory was used as a baseline, multiple additional data sources, including LIDAR (Light Detection and Ranging) and planimetric data were used to augment the baseline data. The work performed to derive a new dataset included revising polygon boundaries where needed, adding wetland functions, estimating pre-European settlement wetland locations and identifying potential wetland restoration or enhancement opportunities. Additional data was collected at 48 field sites to calibrate the results from the GIS wetland function assessment. The preliminary assessment data indicates that approximately 49% of pre-European settlement wetlands have been lost, similar to previous studies. Additionally, 82% of existed wetlands are rated high for flood storage, 48% are rated high for nutrient transformation and 39% are rated high for sediment/particulate retention, functions that are of particular significance in the Des Plaines Watershed. Limitations of the WRAPP study include the

selected functions will reflect some but not all of the watershed priorities, identification of potentially restorable wetlands was based on current land use data and does not consider property ownership or future land use plans, and this is a predicted functional assessment which is not a substitute for a field study.

Q- Is it possible to put a dollar value on the ecological services that will be provided by the enhanced wetlands?

A- It is possible, but it is outside the current scope of this current study. It will be a next step that will be identified in the WRAPP final report.

Q- The Illinois Tollway Authority has commissioned an environmental impact study of the extension of Route 53. How will this effect wetland loss in the watershed?

A- The Tollway will be required to provide wetland mitigation. The mitigation is based on acreage not wetland function.

Q- It appears that many of the wetlands in the county were historically linked together. How does isolated wetland restoration or mitigation address the loss of linkages?

A- Both linked and isolated wetlands have pros and cons. For example resources in isolated wetlands may be more resistant to predators and diseases, and linked wetlands may be more resistant to urban influences.

Q- When will the online mapping tool be available and how will the public know when it is available?

A- A draft version should be available in early 2018. SMC will notify the public through the watershed email list.

Q- How will SMC address wetland sites from previous watershed-based plans being identified using a different selection and prioritization criteria?

A- SMC will be looking into that when we get to that level of detail in the plan. By changing the selection criteria there is a risk of losing restoration opportunities, but if some areas are improperly ranked there will be a need to change the prioritization criteria.

#### **4. *Buffalo Creek Clean Waters Partnership (BCCWP)***

##### **a. Watershed Project Updates**

##### **i. Jeff Wiess**

- Buffalo Creek Basin Expansion: Bid review and contracting is underway. Work will start for this project in Spring 2018 to extend storage capacity to 920 acre-feet, improve stream outlets and buffers and improve trails and public access.
- BCCWP 2018 Events: Earth Day at Deer Grove Forest Preserve in April, Rylko Park clean-up/plant-up workday in May, Farrington clean-up/plant-up workday in September, River Watch in May and June, Buffalo Grove/Deer Grove seed harvest and cleaning from August to December.

##### **ii. Tom Milas, Emerald Ash Borer Manager, Village of Buffalo Grove**

- The Village of Buffalo Grove hired a designated staff member to maintain restoration sites, create new management plans for 20 sites (five along Buffalo Creek), implement corporate and grant funding for multiple projects, create signage and increase proactive communications with residents.
  - The new projects include: Farrington Ditch, Buffalo Creek Nature Preserve, Jacobs Court Pond, White Pine Ditch and the Buffalo Grove Village Hall Basin.

- iii. Dan Anderson, Parks Specialist, Buffalo Grove Park District
  - The Buffalo Grove Park District conducted restoration at 15 natural areas in 6 parks and received SMC, Green Region and WMB grants for those projects. The District hired land management staff to maintain the sites, start a new prairie establishment project, and create a native seed collection and nursery.
- iv. Jeff Mengler, Senior Project Scientist, Hey & Associates, Inc.
  - Buffalo Creek Wetland Mitigation Bank: Semper Fi Land won the contract to complete the project. So far, all drain tiles have been disabled and a storm sewer was installed to prevent upstream flooding. Trails and berms are currently under construction, and brush/tree clearing is underway. Dormant seeding will occur before the first major snowfall
- b. Marcy Knysz, Watershed Coordinator, BCCWP
  - BCCWP Milestone Scorecard: Due to time constraints, discussion on the milestone scorecard was delayed until the next BCCWP meeting.

#### Meeting Attendees

Last Name	First Name	Organization
Adam	Mike	Lake County Health Department
Adler	Beth	Des Plaines River Watershed Workgroup
Anderson	Dan	Buffalo Grove Park District
Benjamin	Grant	Squaw Creek Clean Water Alliance
Burger	Jeanette	Resident
Burke	Caitlin	Gewalt Hamilton Associates
Cahill	Jack	Squaw Creek Clean Water Alliance
Crane	Julie	Lake County Stormwater Management Commission
Gallett	Michael	Village of Kildeer
Heilemam	Rosemary	Resident
Huaracha	Ernesto	Lake County Stormwater Management Commission
James	Kirsten	Hey and Associates, Inc.
Johnson	Chris	Sierra Club
Jozefowski	Jacob	Lake County Stormwater Management Commission
Knysz	Marcy	Manhard
Krocza	Rick	Vernon Hills Park District
Mosca	Vince	Hey and Associates, Inc.
Pribyl	Susan	Squaw Creek Clean Water Alliance
Prusila	Mike	Lake County Stormwater Management Commission
Reynolds	Mike	Village of Buffalo Grove
Rodriguez	Gaby	Vernon Hills Park District
Warren	Ashley	Lake County Stormwater Management Commission
Weidenfeld	David	Village of Buffalo Grove
Weiss	Jeff	Bull Creek
Werner	Patty	Citizen
Wolfgram	Jeff	Village of Wheeling